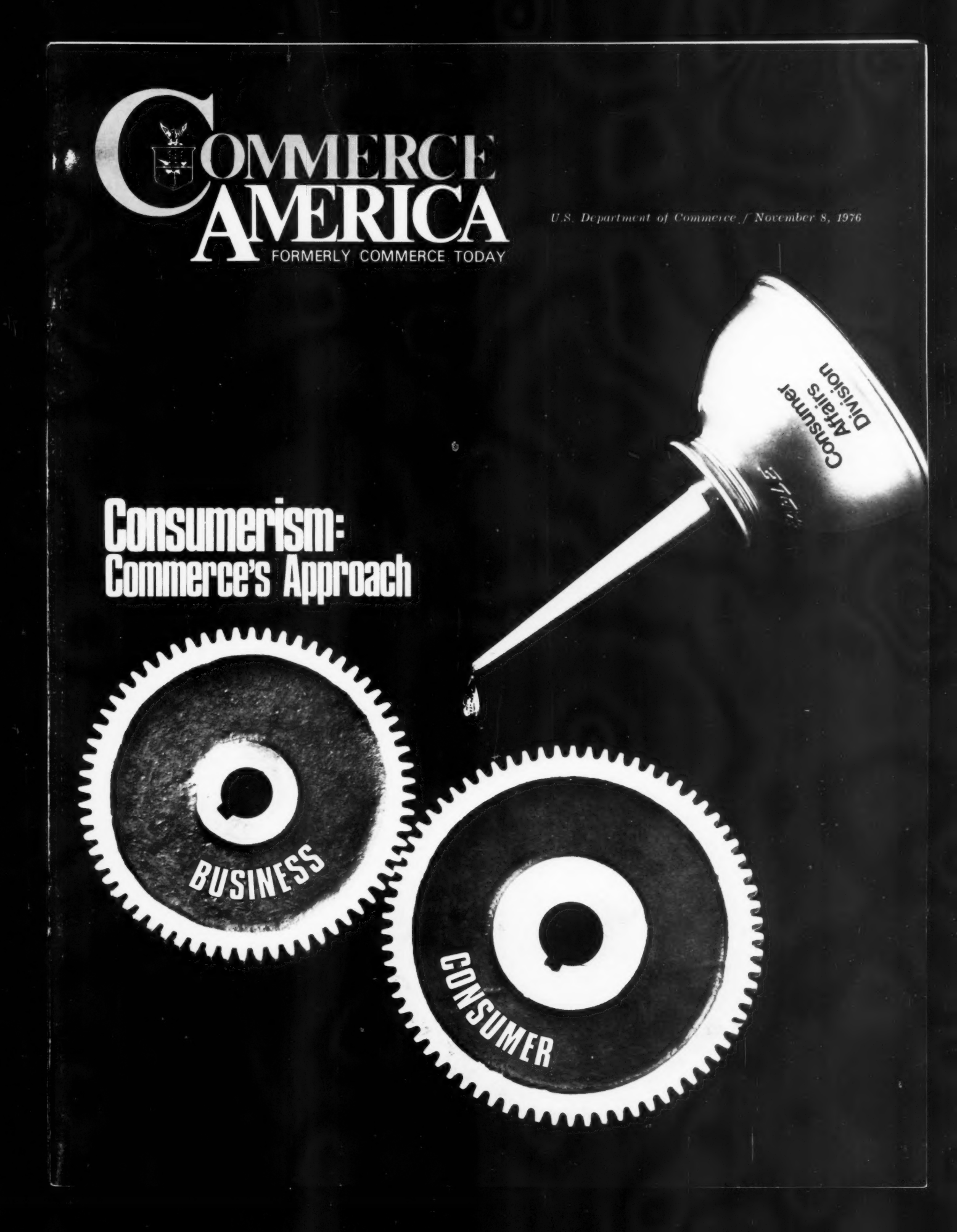
COMMERCE AMERICA

FORMERLY COMMERCE TODAY

U.S. Department of Commerce / November 8, 1976



Consumerism: Commerce's Approach

Newsmemo

Activity in the service industries contributes a brisk note to the U.S. economic pace. Here are some rates of increase in the first seven months of 1976 over the same period of 1975: hotels and motels, up 18 percent; business services, 15 percent; miscellaneous repairing, 14 percent; automotive services, 12 percent; amusement and recreation, 8 percent, and personal services, 7 percent. The uptrend is expected to continue through 1976.

Use of electronic equipment in automobiles is growing. In 1971, the average U.S. car had about $35 worth of such equipment. That total has now doubled. The total value of electronics used in autos is growing at a 40 percent annual rate. One example: the major U.S. makers are developing electronic systems to analyze status of engine vacuum, coolant temperature, engine speed and crankshaft position and use this information to ignite the fuel in each cylinder at the precise optimum instant. It is expected that the systems can add one or two miles per gallon to fuel efficiency and help cut down harmful emissions.

Phasedown in use of tetraethyl lead in gasoline has been delayed. Impending U.S. shortage situation, in which motorists would have been pitted against petrochemical workers, has been averted. NEWSMEMO of Sept. 27 issue had reported concern of petrochemical industry that lead phasedown would mean increased 1977 refinery use of aromatics, cutting into tight supplies vital to plastics and synthetics production. The Environmental Protection Agency has now extended the deadline for the first lead phasedown in gasoline to Jan. 1, 1978. This should provide refiners and petrochemical producers time to prepare for the necessary changes.

Meanwhile the march toward better highway fuel consumption continues at a good pace. EPA figures from its lab tests on 1977 model cars indicate an overall average of 18.6 miles per gallon. That adds a full mile per gallon to similar tests conducted on 1976 model cars, and represents 19 and 34 percent improvement over the 1975 and 1974 models, respectively. It also puts the 1977s ahead of the 18 MPG goal set for 1978 models. All of this is to be viewed against the long-range goal of 27.5 MPG by 1985.

The International Tin Council this year has welcomed its most important new member–the U.S. Americans use 28 percent of all of the free world's consumption, and 80 percent of it comes in from abroad, principally now from Malaysia. U.S. mines produce only negligible amounts of tin, but our secondary production is the largest in the world. The International Tin Agreement, handled by the Council, brings together both producing and consuming nations in price-stabilizing and supply-demand arrangements. Its basic mechanisms are a buffer stock and schedules of export quotas.

Hourly wage demands seem to indicate an easing of inflationary pressures. The all-industries median first-year increase negotiated in 1976 is 45 cents an hour, down 10.5 cents from 1975, according to a Bureau of National Affairs survey. Construction median increase is 54.5 cents, down 20.6 cents; in manufacturing, the median increase is 40.3 cents, down 1.1 cents; in non-manufacturing, 45.5 cents, up 0.8 cents. Another factor in this situation is, of course, the new emphasis on increased fringe benefits for workers.

Advocates (and foes) of industry self-regulation have their eyes on cosmetics and toiletries. A voluntary ingredient safety review program is being developed by that industry to protect consumers. Its impact will extend far beyond the beauty aids field, however. It could help prove to Congress and the public that self-regulation by industry is feasible, effective and less expensive to taxpayers than government controls. The cosmetics review program provides for: 1) a central data bank of independent scientific findings and opinion relating to ingredient safety; 2) assurance of equitable evaluation of all cosmetics and toiletries ingredients; 3) assistance to small producers with limited lab resources.

A strong audit committee can help safeguard a corporation's public image. Price Waterhouse has newly updated its 1973 pamphlet, "The Audit Committee." It recommends that the chairman and majority of members of such groups be outside directors, and that audit committees be responsible for nomination of independent accountants, review of their reports and recommendations, and determination that management takes appropriate follow-up action. Every corporation with publicly-traded securities should have such an active audit committee, in the Price Waterhouse view.

COMMERCE AMERICA
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COVER: Just as the squeaky wheel gets the oil, a special division has been established at Commerce to pour a little oil on the sometimes troubled waters between the business community and the nation's consumers. Our story beginning on page 4 explains what the Consumer Affairs Division is doing about the situation.

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Published biweekly by the U.S. Department of Commerce, Washington, D.C. Annual subscription rate $29.80 ($7.45 additional for foreign mailing, $5.75 additional for domestic air mailing). Single copy $1.15. Make checks or money orders payable to Superintendent of Documents and mail to Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, or to any U.S. Department of Commerce District Office.

All subscription inquiries and address changes should be sent to the Superintendent of Documents, at the above address. This is the central distribution agency for U.S. Government publications.

Microfiche copy available at $2.25 per issue from National Technical Information Service, Springfield, Virginia 22151. Other inquiries should be sent to the U.S. Department of Commerce, 14th Street and Constitution Avenue, N.W., Washington, D.C. 20230.

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ECONOMIC HIGHLIGHTS

Growth In Output Moderate; Final Sales Edge Upward

This column was written by John W. Kendrick, Commerce Chief Economist, in collaboration with staff economist Theodore S. Torda.

John W. Kendrick

The nation's real output of goods and services rose at an annual rate of 4.0 percent in the third quarter, following increases of 4.5 percent in the second quarter and 9.2 percent in the first quarter. This slowing in the growth rate of real GNP partly reflects the pattern of inventory investment, which swung from liquidation in the fourth quarter of 1975 to accumulation in the first quarter of 1976. During the second quarter, however, accumulation of business inventories remained close to the first quarter rate, and it declined a bit in the third quarter, according to the preliminary numbers. This means that the stimulus to growth provided by the change in inventory investment in the first quarter was absent in the next two quarters. The rise in consumer spending has been more moderate since the first quarter, and this has also been a major factor contributing to the subdued growth rate in real GNP during the second and third quarters.

Growth in real final sales, i.e., real GNP less inventory investment, has edged up during 1976—from an annual rate of 3.7 percent in the first quarter to 4.2 percent in the second and 4.4 percent in the third. The strengthening in real final sales helps to set the stage for more vigorous inventory investment by producers, wholesalers, and retailers. Since yearend, the increase in the physical volume of nonfarm business inventories has been closely geared to the rise in real business sales, so the overall inventory/sales ratio has remained unchanged. The recent settlement of several major strikes, notably in the tire and auto industries, coupled with a continued pickup in growth of real final sales, should induce greater inventory accumulation in the fourth quarter. In addition, there is a reasonably good prospect of a rise in farm inventories, which were drawn down in the past two quarters.

Growth in personal consumption expenditures continued in the third quarter close to the second quarter rate of 4 percent. A stronger rise in durable goods spending largely offset a more moderate advance in nondurable goods, while purchases of services rose at the same rate as in the second quarter. However, real outlays for new cars have shown no improvement since the first quarter, when they rose sharply.

The third quarter gain in total consumer spending occurred in the face of a pronounced slowdown in the growth of consumers' purchasing power, largely attributable to a significant decline in farm proprietors' income. Real disposable personal income rose at an annual rate of only 0.9 percent compared to a 5.4 percent rate of advance during the first six months of 1976. Consequently, the personal saving rate dropped from 7.1 percent in the second quarter to 6.4 percent in the third quarter, representing the lowest saving rate for any quarter during the recovery to date. This in turn reflects an erratic quarterly pattern in farm proprietors' income, which dropped by $5.8 billion following a $5.6 billion gain in the second quarter. Despite variations in their income, farmers tend to spend for personal consumption at a fairly steady pace.

The gain in real outlays for business fixed investment slowed moderately in the third quarter. A strengthening in the rise of producers' durable equipment did not fully offset a virtual leveling in the structures component. The overall recovery in capital spending continues to be sluggish, considering the severity of the decline during the recession. Real outlays for business fixed investment have recovered by only 6.3 percent during the past year, following a cutback of 17.5 percent from early 1974 to late 1975.

It appears that actual plant and equipment outlays continued to fall below firm's plans. The most recent survey of the Commerce Department, which is expressed in current-dollar terms, indicated that businesses planned a 17 percent rate of increase in plant and equipment in the third quarter. This compares with the estimated 12 percent increase in the current-dollar figure for the nonresidential fixed investment component of GNP.

Of all major sectors of final demand, residential construction posted the largest percentage gain in the third quarter, despite a progressively slower rate of recovery since late 1975. Housing starts demonstrated renewed strength in the third quarter, particularly in September when the monthly increase was 18 percent. This should provide impetus to residential construction in the fourth quarter because more than 90 percent of the construction activity related to September's housing starts will occur in subsequent months.

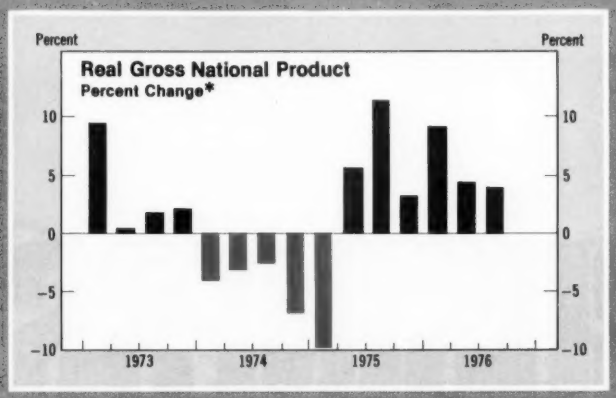
Net exports of goods and services edged up in the third quarter. Both federal and state and local government purchases of goods and services continued to recover from the declines registered in the first quarter. As shown in the chart, there have been a number of quarterly declines in real purchases by the Federal Government in recent years. Since early 1973, there has been virtually no net increase.

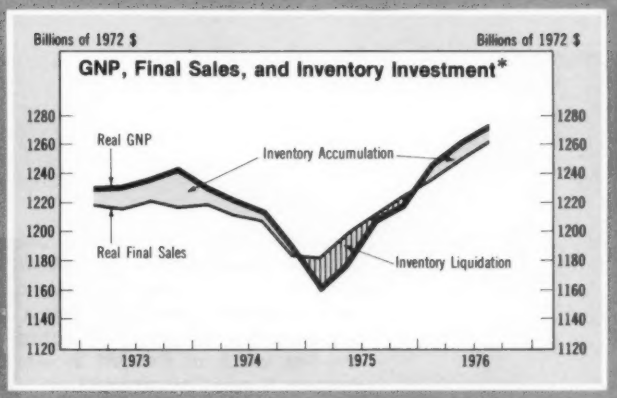
During the third quarter, there was a significant rise in import prices—at an annual rate of 17 percent. Prices paid by consumers for energy also rose at an annual rate of 17 percent. The price of residential construction rose a rapid 10.2 percent but was still below the second quarter rate; automotive prices decelerated from about 12 percent to below 6, and prices of food and household durables continued to rise at annual rates of less than 2 percent.

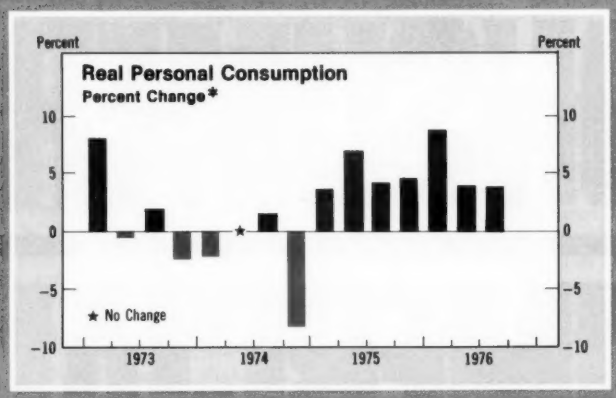
The rise in the GNP price deflator slowed from an annual rate of 5.2 percent in the second quarter to 4.4 percent in the third quarter. These rates of inflation are higher than in the first quarter, when temporary declines in food and fuel prices held the overall increase to 3.2 percent, but still represent an improvement over the 9.3 percent increase in 1975.

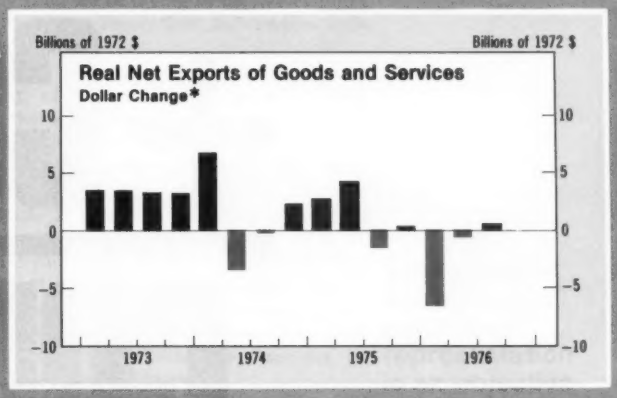
As a concluding note, it is of interest that the economic recovery thus far is similar to comparable periods of previous recoveries. Since the trough of the business cycle, reached in the first quarter of 1975, real GNP has risen at an annual rate of 6.3 percent. This is slightly better than the average 6.0 percent rate of advance during the first six quarters of the four previous recoveries. By contrast, real final sales have increased at an annual rate of 4.5 percent during this recovery compared with an average of 4.9 percent during comparable periods of four previous recoveries. While this is only a rough comparison, the difference between the two rates is substantial. However, it is much less than the difference in the first and second quarters.

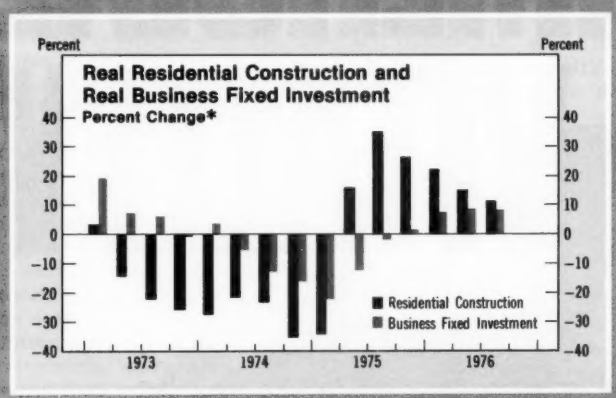
There is a reasonably good prospect for some pickup in the growth rate of GNP during the fourth quarter, largely from business fixed investment, residential building, and inventory investment.

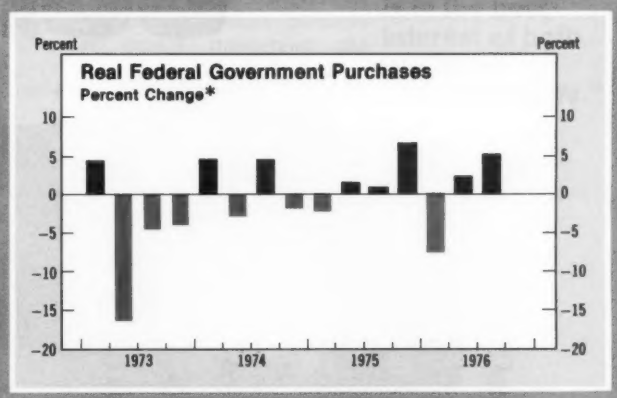


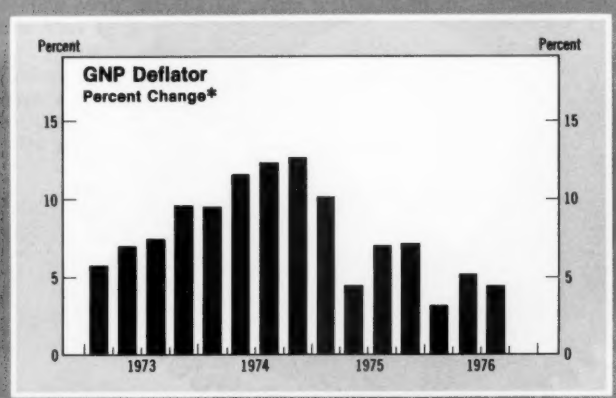


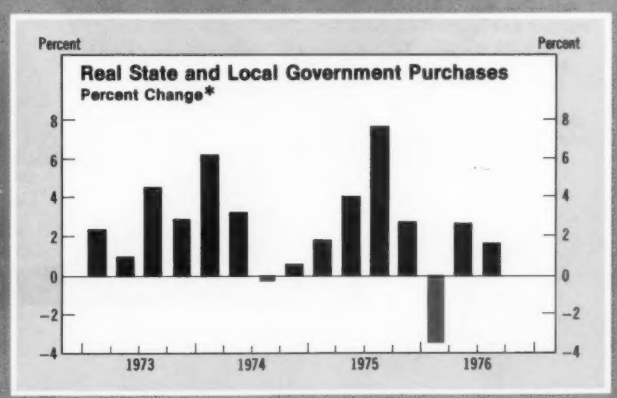












*Seasonally adjusted annual rate.

BUSINESS + CONSUMER = COMMERCIAL VITALITY

Commercial vitality requires that the business-consumer relationship be a two-way street. . . . and a new Commerce unit is keeping that street well-paved, with its lighting in good repair and its lanes clear of any occasional mishaps.

Pursuant to a Presidential directive calling for more responsiveness to consumer needs throughout the Federal Government, a Consumer Affairs Division was established at Commerce early this year.

Director of the Division is Mrs. Meredith M. Fernstrom, who notes that concern with consumer affairs is nothing new for the Department of Commerce. "The success of any business enterprise depends on consumer satisfaction," says Mrs. Fernstrom. "Therefore, the Department's concern for consumer representation is an objective which ultimately is in the best interest of both business and consumers."

A number of Commerce units have functions which result in very direct and significant impact on consumers. They include:

National Bureau of Standards—which is active in the areas of weights and measures, product labeling, energy efficiency, and standardization;

National Marine Fisheries Service—which conducts on-site voluntary seafood inspection programs;

National Fire Prevention and Control Administration—which reviews fire codes and equipment, home safety measures, and the causes of fire, and makes recommendations to fire departments throughout the country; and

Domestic and International Business Administration—which is involved in trade negotiations, export controls and other commercial practices, and administers the Department's field office program, which is often the consumer's first point of contact with the Department.

There is also the Office of the Ombudsman, which serves both business and consumers, and by definition is the Department's official "red-tape cutter." The Ombudsman answers inquiries and complaints, and makes individuals' opinions and suggestions known to policymakers in the Department. It provides publications and economic studies dealing with current problems, statistics, or policies that impact on business.

Organizationally, the new Consumer Affairs Division was placed in the Ombudsman's Office largely because it was already the Department's complaint handler and trouble shooter.

Its access to the resources of the Office of Business Research and Analysis and other government agencies also made the Ombudsman's Office a natural home for the new unit.

"The division's role as in-house consumer advocate is to bring the views of the consumer into balance with those of business in policy and program decisions of the Department," says Fernstrom.

"Secretary Richardson has been wholly supportive of everything we're trying to do. We couldn't have asked for more cooperation and understanding," Fernstrom adds.

"For instance, he has been very active in pressing for recruitment of consumer representatives on each of the advisory committees of the Department on which they are eligible for membership, so consumers can be represented at the early stages of policy development when they can have meaningful input. In cases where consumer representatives are barred by statute from membership in certain committees, he has agreed that they be allowed to participate in their open meetings.

"He has also established a Departmental policy to reimburse consumer representatives for their travel and expenses to facilitate their serving as members of advisory committees."

The Consumer Affairs Division has nominated nearly 40 consumer representatives for various committees in the Department through contacts with major consumer groups throughout the country.

The division chief also advises the Secretary on

". . . the Department's concern for consumer representation is an objective which ultimately is in the best interest of both business and consumers."

ACCESSIBLE—Secretary Richardson places high priority on the Department's consumer representation effort. Here he talks over a project with Consumer Affairs Division Director Meredith Fernstrom.

"We're hoping that business will respond voluntarily to the consumer movement."

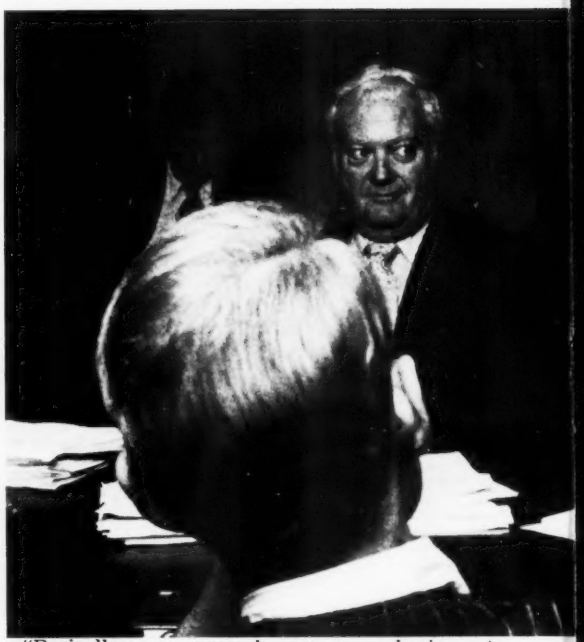
consumer matters in her role as staff director of the newly formed Consumer Affairs Council, which is composed of representatives from each organizational unit with consumer-related responsibilities. The Council meets monthly to consider consumer issues, prepare recommendations for policy officials, and submit reports on consumer affairs to the Secretary. It provides a forum where the Department's leading officials in the consumer affairs area look at major issues on which Commerce clearly has responsibility and try to develop programs that will promote consumer interests.

In a similar vein, the Consumer Affairs Division is taking part in a nationwide series of seminars sponsored by the Bureau of Domestic Commerce and the Office of Field Operations on business-consumer relations. The sessions include a speaker from Commerce outlining the Department's role in consumer affairs, as well as local consumers and businesses presenting examples of particular problems and solutions they have found.

"We're hoping that business will respond voluntarily to the consumer movement. This could go a long way toward reducing the amount of consumer protection legislation being passed. The consumer movement is here to stay, and unless business executives adjust to it voluntarily and try to shape its direction, then they can expect to have the solutions dictated to them through legislation they have had no hand in shaping."

The Seminar program encourages the use by businesssmen of guidelines developed by the National Business Council for Consumer Affairs to promote better responsiveness to consumer concerns in such areas as advertising claims, warranties, labeling, and similar matters.

The division urges both business and consumers to put an end to the "us-them" situation and to avoid stereotyping each other. "There are, in fact, a growing number of consumer affairs professionals who are trained in the disciplines of economics, consumer behavior, or marketing; who are reasonable and objective in their approach to consumer concerns; who understand the trade-offs involved in many issues; and, most importantly, who believe in and support the economic philosophies of the free enterprise system," Fernstrom points out. "As the consumer movement becomes more institutionalized, these professional consumer advocates will play an increasing role in representing the needs of the average 'grassroots' consumer—not just those of certain special-interest groups. What we're advocating is that business interests actively seek these people out and work out mutually satisfactory solutions with them. After all, the earlier a problem is recognized and remedied, the less painful and expensive the solution should be.



"Basically, our approach encourages business to adopt what we call the 'Seven C's' for consumer affairs," says Fernstrom:

Conciliation. Much valuable time, energy, and talent is being wasted while each continues to point the finger, place the blame, and shirk responsibility on consumer issues. We must put an end to the adversary relationship in which business and the consumer have existed in recent years, and which has forged the shape of the consumer movement today. . . .

"We can't talk to them."

"They don't listen."

"They're so unreasonable."

Who says these things? Interestingly enough, consumers say it about business, and, business says the same thing about consumers.

Commitment. The real goals of consumerism were crystallized in the "Consumer Bill of Rights" outlined by President Kennedy in 1963. These included:

the right to choose,
the right to be informed,
the right to safety, and
the right to be heard.

This Bill of Rights should serve as the foundation for developing a socially committed corporate philosophy for consumer affairs. Business leaders should formulate the consumer philosophy of their firms and make it known throughout all levels of the organization—to management, employees, *and* customers. They can then evaluate corporate programs and policies against this philosophy: how does each affect the consumer's health, safety, or economic position? What changes are needed to better serve the consumer?

Also, it is highly desirable that, wherever possible, a top executive be designated whose primary responsibility is consumer affairs, and who has meaningful input to policy decisions. It may also

IDEA FACTORY—John P. Kearney, Commerce's Ombudsman and chief of its consumer affairs program, and Fernstrom meet with Commerce's Consumer Affairs Council.

be productive to implement employee training programs in consumer relations, since consumer problems often result from inadequate or incorrect information, bad attitudes, or overly-aggressive sales tactics on the part of some employees.

Credibility. Actions do speak louder than words, particularly in the area of corporate consumer affairs. Carefully examine corporate practices—from the quality and safety of the product—to the way it is packaged, labeled, priced and advertised—to the way customers are treated—to the ways in which competition is handled. All should be above reproach.

Corporate credibility should lead to the practice of industry self-regulation. Within legal bounds, all members of the business community should support measures designed to curtail unethical practices by the few. Don't defend, excuse, or otherwise appear to rationalize improper business conduct.

Communication. The need for improved business communication is perhaps the single most important factor in the success or failure of business today. Recent studies have found an alarming increase in hostility toward, and suspicion of, the American economic system and business itself.

Real communication involves much more than just talking with colleagues. Communication must start within the company– with employees, in the community where the firm operates, with customers, and with elected officials. Let them know the company's opinions on the issues. Tell them the firm's problems. Make them aware of the costs and trade-offs involved in matters that affect the company.

Whenever a possible consumer problem appears on the horizon, initiate a dialogue—early in the game and on a personal basis—with consumers and consumer organizations. And always bear in mind that the most important, and often most difficult, part of any dialogue is listening to the other party.

Many companies are communicating effectively with consumers through the establishment of Consumer Advisory Committees. These Committees are not formed for "window dressing" or as a new public relations tactic, but to provide a forum for real dialogue with consumers on substantive issues. Therefore, such committees must be made up of persons who truly represent the consumer's interest. They should be allowed every opportunity to discuss issues which concern them, and their advice should be given full consideration in determining the company's final position.

Also, it is often beneficial for business to communicate with state and local consumer agencies and major consumer organizations simply to keep abreast of their views. Subscribe to their newsletters; attend their conferences. You might be surprised at what you'll learn.

Another vitally important aspect of communication for industry is in the areas of product labeling, advertising, and promotion. Take a look at all forms of consumer information that the company produces. Do they convey the facts adequately and accurately? Is printed information in compliance with pertinent regulations and still intelligible to the "average" consumer?

And, very importantly, do top executives make an effort to read and respond personally to complaint letters?

It is also helpful to tell customers how to complain. Let them know who to contact, and what details or documentation to provide. Encourage them to tell what action they expect to be taken.

Cost-effectiveness. There is a growing need for government, business, and consumers to take a long hard look at the cost of consumer protection versus its benefits.

This country's economy has reached a point where it may no longer be able to afford "protection at any cost;" where, increasingly, the consumer must assume a greater share of responsibility for his own health and safety, and for the economic consequences of his decisions in the marketplace; and where trade-offs and compromises must be vigorously pursued and accepted by both consumers and business.

Business leaders should formulate the consumer philosophy of their firms and make it known throughout all levels of the organization . . .

Mrs. Fernstrom combines the final 2 C's—**creativity** and **courage.** "Consumerism is an extremely complex, emotional, and all-encompassing movement—and as noted above it's not going to go away. It is imperative, therefore, that leaders of the business community call forth the tremendous reserves of creativity and courage that have made the American marketplace what it is today in order to meet the challenges and to benefit from the opportunities of the consumer movement."

Energy Digest

COMMERCIAL SOLAR POWER . . . The Federal Energy Administration has contracted with 11 electric utility firms to develop means of integrating solar electric power generating equipment into their distribution networks in the Southwest. The firms will evaluate, from a utility's point of view, the technical, legal, economic and institutional considerations needed to make solar electric energy a success in the Southwest. The study is essential, FEA points out, because the primary investment in solar electric power stations—when solar electricity becomes practical—will come from utility firms. The firms will identify economic factors necessary for accelerated commercialization; assess regulatory and legislative factors that could affect accelerated expansion; evaluate alternative organizational plans to meet the goals; and determine ways to increase utility participation in solar research and development activity.

COST REDUCTION GUIDES . . . A jointly-sponsored study of the nation's 92,000 small laundry and dry cleaning firms, designed to reduce energy use and costs, is being undertaken by the Federal Energy Administration and the International Fabricare Institute. These cleaning establishments have had major increases in energy costs during the past several years. The study, the first of seven which are planned for different small industries, began with detailed on-site energy audits of selected firms. The results of these audits will be incorporated into energy cost reduction guides to be published by IFI for distribution to its membership, as well as to other small businesses in the industry. In addition, IFI will sponsor a series of workshops across the country, involving the Institute's affiliates, FEA's regional offices, state energy offices, and local offices of the Small Business Administration.

CAVEAT ON COAL . . . From the heart of coal country comes a warning that U.S. energy planners may be putting too much reliance on coal. Richard L. Gordon, Professor of Mineral Economics, Pennsylvania State University, warns that expectations about the role of coal in U.S. energy supplies may be exaggerated. In a critical examination of the long-term use of coal as an alternative energy source in the United States and the implications for Canadian consumers, Gordon points out that many projections of coal as a source of energy rest on very poor information regarding the economic viability of coal deposits. While official estimates of U.S. reserves do not rule out the prospects of a substantial move toward coal in the future, they do suggest that known, low-cost supplies are inadequate to warrant such a development, in Gordon's view. He also points out that U.S. mine safety laws, strip-mining regulations, land-leasing policies and controls on sulfur emissions are causing significant delays in developing such U.S. coal supplies as are available. In addition, reserve estimates in Canada raise serious questions concerning the feasibility of western reserves making a major contribution to that country's future energy needs, he concludes.

SOLAR-POWERED WELLS . . . ERDA is testing the feasibility of using solar power to pump irrigation water from deep wells in Arizona. Project directors are seeking proposals for the design of an experimental 200-horsepower solar system. Initial contracts will cover preliminary design studies for the system. The award of three concurrent contracts, approximately $300,000 each, is planned. The best design resulting from the preliminary design phase, if the approach continues to look promising, will be selected for the detailed design, construction and test portion of the project. Plans are for the system to be in operation by the end of 1979. Requests for proposals may be obtained from Kent A. Campbell, Contracts Negotiation Branch, ERDA, Box 5400, Albuquerque, New Mexico 87115. Deadline for proposals is Nov. 15.

CEMENT FIRM LAUDED . . . The first cement company on the West Coast totally to convert from natural gas and oil to coal as its primary fuel in manufacturing cement has been cited by the Federal Energy Administration. Amcord, Inc., of Newport Beach, California, started its conversion planning more than three years ago, when little attention was paid to the impending energy crisis. By making the conversion, the firm has freed up 12 billion cubic feet of increasingly scarce natural gas each year and has also reduced air pollution since all of the coal combustion products, including ash and sulfur, are absorbed directly into the finished cement. The cement industry, which accounts for 3.5 percent of the energy consumed in all U.S. manufacturing, is the nation's sixth largest industrial user of energy.

Down To The Sea In . . . . . Miners' Helmets?

IMMENSE RAW MATERIAL DEPOSITS SEEN POSSIBLE WHERE EARTH'S CRUSTAL PLATES COME TOGETHER

Miners of the future may be going to work in submarines if a theory recently propounded by Commerce and UN scientists proves valid . . . . and a new source of industrial raw materials in an increasingly resource-short world may be feeding America's factories.

Giant crustal plates that compose the floor of the Pacific Ocean may be rimmed by rich mineral deposits, according to scientists with Commerce's National Oceanic and Atmospheric Administration (NOAA) and the United Nations.

The earth's crust is divided into a jigsaw puzzle of irregular plates; some stationary, some moving slowly at a rate of only a few centimeters a year. The borders of the plates are scenes of massive, sometimes violent, geologic activity. At undersea ridges along some plates' edges, new crustal material wells up from the molten mantle of the earth and spreads outward. Elsewhere, at deep ocean trenches, the plates collide, with one usually sliding beneath the other. Under most of the Pacific Ocean is a single crustal plate.

Deposits of oil and metals, according to Dr. Peter A. Rona of NOAA's Environmental Research Laboratories and Lawrence D. Neuman of the UN Office for Ocean Economics and Technology, are linked to plate tectonics—the global geologic process that includes sea floor spreading and continental drift. Because of this, they say, marine prospectors should concentrate on areas of tectonic activity where the plates interact, and the Pacific plate is ringed by them.

Oil and metals

Along the trenches and ridges found under the Pacific, the Commerce Department and UN scientists believe, are immense deposits of oil and metals.

Where oceanic crust is descending below a continent, curved strings of islands, known as "island arcs," form offshore, sectioning the ocean into smaller basins such as the Sea of Japan and the Bering Sea.

According to Rona and Neuman, trenches and island arcs act as barriers that accumulate sediment and organic matter, both from the continent and the ocean basin. Here, oceanic circulation is restricted, oxygen is not replenished in the water, and the organic matter is preserved. Geothermal heat in the trenches and small basins help convert the organic matter to petroleum. Finally, powerful pressures of colliding plates form traps where the petroleum can accumulate.

At boundaries where new crust is being generated, as along the East Pacific Rise, hydrothermal processes would concentrate metals, they believe. In the first stage of this process, cold, dense sea water descends through cracks in the ocean floor to be heated by contact with hot and molten rocks. It then rises, leaching metals from the crustal rock as it does, and discharges from the ocean bottom as hot springs. Some of the leached metals combine with sulfur in the sea water and precipitate in layers containing copper, iron, and possibly gold, according to the theory.

Rich deposits of sulfide metals already have been found along two ocean rifts. About five years ago, the richest known submarine metallic sulfide deposits were found in basins along the rift bisecting the Red Sea, by geologic standards an infant ocean basin. Sediments there contain iron, zinc, copper, and lead, plus small amounts of silver and gold.

At the crest of the Mid-Atlantic Ridge, part of the oldest rift system on earth, a NOAA field study begun in 1972 discovered a hydrothermal field where sediments contain manganese concentrations of 40 percent.

The presence of mineral-rich sediments at a young and an old rift suggests to the scientists that the mineral formation process may continue throughout the lifetime of a spreading rift. They believe fields similar to those in the Atlantic and Red Sea may exist along the East Pacific Rise.

Trenches where two plates are converging would also be good candidates for metals prospecting, the two predict. Precious metals, including gold, silver, and platinum; base metals such as antimony, copper, lead, mercury, tin, and zinc; and iron and iron-alloy deposits containing chromium, cobalt, manganese, molybdenum, nickel, tungsten, and vanadium are concentrated by processes there.

Where it's at

Deposits of these metals occur along the western edges of North and South America. In the western Pacific, such deposits can be found on island arcs such as Japan, the Philippines, and Indonesia.

It is thought that the metals are extracted from oceanic crust saturated with sea water as it descends into the earth's hot interior and begins to melt. The metals ascend again as components of molten rock, are concentrated in fluids released from the rock, and deposited on the ocean floor.

The scientists conclude that "the concept of plate tectonics may be applied to predict areas hundreds to thousands of kilometers in extent of the Pacific region where certain types of energy and mineral resources are likely to occur." Thus, geologic processes may provide a treasure map for marine and land prospectors.

EIGHTEEN APPOINTED TO PRODUCTIVITY BOARD

Eighteen individuals have been appointed to the Board of Directors of the National Center for Productivity and Quality of Working Life.

They are: I. W. Abel of Pittsburgh, president, United Steelworkers of America; Donald C. Burnham, Pittsburgh, director-officer, Westinghouse Electric Corp.; Berkeley G. Burrell, Washington, D.C., president, National Business League; Edward E. Carlson, Chicago, chairman-chief executive officer, United Airlines, Inc.; and C. L. Dennis, Des

Plaines, Ill., international president, Brotherhood of Railway, Airline, Steamship Clerks, Freight Handlers, Express and Station Employees.

Also, John T. Dunlop, Belmont, Mass., professor, Harvard Business School; Daniel J. Evans, Seattle, governor of the State of Washington; Frank E. Fitzsimmons, Chevy Chase, Md., president, International Brotherhood of Teamsters; Gaylord Freeman, Wayne, Ill., honorary chairman, First National Bank of Chicago; and Robert A. Georgine, Silver Spring, Md., president, Building and Construction Trades, AFL-CIO.

And Andrew E. Gibson, Short Hills, N.J., president, Maher Terminals; James E. Holshouser, Jr., Boone, N.C., governor of the State of North Carolina; Wayne L. Horvitz, Washington, D.C., chairman, Joint Labor-Management Committee of the Retail Food Industry; J. Lane Kirkland, Washington, D.C., secretary-treasurer, AFL-CIO; R. Heath Larry, Pittsburgh, vice chairman of the board, U. S. Steel Corp.; Bess Myerson, New York, syndicated columnist and consumer advocate; and Herbert S. Richey, Bath, Oh., president-chief executive officer, Valley Camp Coal Company; and L. William Seidman, Ada, Mich., assistant to the president for economic affairs.

In addition to these private citizens, the Board of Directors also includes Secretary of the Treasury William E. Simon; Secretary of Commerce Elliot L. Richardson; Secretary of Labor William J. Usery, Jr.; James F. Scearce, director of the Federal Mediation and Conciliation Service; and George H. Kuper, executive director of the Center. Vice President Nelson A. Rockefeller is chairman.

The Center was established in 1975 to stimulate national efforts to improve productivity, and to establish a national policy for continued productivity growth.

Guide Aids Enterprises In Financial Difficulties

Making a success of a small business is a difficult job, and many find themselves in financial difficulties. A new publication, *Strategies and Techniques For Saving The Financially-Distressed Small Business,* gives the business executive an overview of remedies that are available.

Written by a practicing attorney and professor of business and law, the guide tells how to protect the business from overzealous creditors, how to minimize personal liability and how to turn business adversity around. Its major sections cover evaluating the troubled business; remedies for the insolvent business; creditors and credit; and mergers, spin-offs and consolidations.

The publication is available from Pilot Books, 347 Fifth Ave., New York 10016 at $3.95 per copy, postpaid.

BLACKS SEEN NEEDING HELP TO HOLD ONTO SOUTHERN ACREAGE

Land owned by blacks in the South could form the equity base for greater minority participation in the growing southern economy, says a new study published by Commerce's Office of Minority Business Enterprise (OMBE).

Entitled *Land and Minority Enterprise: The Crisis and The Opportunity,* the three-part report analyzes patterns of black land ownership in 14 southern states, examines the long-term effects of land ownership on rural black families, and suggests a low-cost government policy designed to stabilize black land losses in the South and strengthen black agricultural enterprises.

Approximately 65,000 southern black landowners controlled close to six million acres worth about $1 billion at the time of the 1969 Agricultural Census. But the study notes that the volume of black-held land, while substantial, was far less than the amount owned by blacks 15 or 20 years before. In the interim, blacks had been losing land at the rate of 330,000 acres per year.

Slowing this trend is critical to the preservation of this unique minority-controlled resource. One solution, the study suggests, is to give minority landowners greater access to the commercial activities that take place on the vast public land holdings in the South.

Noting the extensive federal land holdings in the 14 states covered in the survey, their close proximity to minority-held acreage, and the fact that commercial activity is already quite extensive on federal lands, the report argues for the use of public lands by minority agricultural interests. An example of such usage would be access to lands controlled by the Forest Service to accommodating the grazing needs of minority-owned beef cattle enterprises.

The Commerce Department study, begun in 1973, is the first attempt at assessing the commercial value of black farmland in the South and its potential leveraging power for rural economic development. It found that the small size of most black-owned parcels limits commercial agricultural enterprises to the sort not likely to provide a sufficiently large return to allow blacks to hold on to this land over the long run.

Commenting on the results of the research, Alex Armendaris, director of the Office of Minority Business Enterprise said, "Farm land in many Southern states offers one of the most important capital resources in minority hands. A realistic strategy for minority economic development should aim at preserving this unique resource as a basis for expansion of the minority financial base in this region.

"While the focus of the OMBE-Duke land study is on black-owned land in Southern states," Armendaris stated, "most of the policy implications would also apply to other regions and to members of other minority groups. It is OMBE's hope that this story will provide valuable input to anyone interested in rural economic development."

The 86-page report is for sale at $1.80 each from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Bioconversion Could Furnish Half Of World Energy Need, Report Says

The promise and problems of bioconversion—producing usable energy from organic matter such as plants and organic wastes—are coming in for increased attention from U.S. government and commercial interests.

The first comprehensive publication on bioconversion for energy and related products has been issued as follow-up to the international conference held in Washington last spring.

Titled *Capturing the Sun Through Bioconversion,* the 865-page document includes all papers and the principal panel discussions at the March conference. Material was contributed by 146 representatives of industry, government and environmental groups who participated in the three-day meetings.

Progress reports on a large number of production and conversion systems are included, as well as detailed research on promising concepts. India, Germany, Sweden and Canada were among twenty nations represented.

Prime sources of bioconversion materials are urban and agricultural wastes (including feed-lot manure) and special energy corps—grown on land and fresh water and in the oceans. Conversion techniques include direct burning, pyrolysis and bacterial digestion. The chemistry and economics of turning wastes and special crops into methane gas, alcohols and other useful products are covered in depth.

Analysts estimate that from 10 percent to upwards of 50 percent of the world's energy requirements could be met through bioconversion at some point early in the next century—with major environmental benefits.

Sponsors included ten federal agencies and five industrial or community associations involved in energy production or environmental protection.

Copies of the report can be ordered for $18 from the Conference Coordination Office—The Washington Center, 1717 Massachusetts Ave., N.W, Washington, D.C. 20036 (202-462-4874)

MORE RELIABLE PRODUCT LIABILITY DATA NEEDED, COMMERCE GROUP FINDS

More reliable data on the extent and impact of product liability claims, skyrocketing increases in insurance rates and the unavailability of insurance for many companies is badly needed. That was the one point repeatedly emphasized during the second meeting of the Commerce Advisory Committee on Product Liability last week. Out of its deliberations, this Committee is expected to provide Commerce Secretary Elliot L. Richardson the ideas and guidance to cope with what is becoming an increasingly difficult problem for the nation's business community.

The Committee was told last week that the capital goods industry and numerous small companies have been hard hit and that rules expanding tort liability have had an effect on the rise in insurance rates.

Presiding at the meeting was Judge Ned Price, Senior Member of the State Board of Insurance, Austin, Tex., Advisory Committee Chairman. Varying points of view on a number of suggested remedies were expressed by members of the committee, which includes representatives of manufacturers, wholesalers, retailers, the insurance industry, insurance regulators, the legal profession, labor, and consumers.

Victor E. Schwartz, Project Director of the Interagency Task Force, presented a summary of progress made in the investigation of the product liability problem and presented subjects for discussion by members of the Advisory Committee.

Reports were made by representatives of the three contractors developing information for the Task Force. They were: Jerry Gordon, of Gordon Associates, representing industry; Frank Orban, The Research Group, Cambridge, Mass., dealing with legal questions; and Philip H. Dutter, McKinsey and Co., New York, representing insurance.

Suggested questions

In addition to presenting summaries of their work, the three representatives suggested questions which they asked the Advisory Committee to consider. Questions included the problem of determining where the product liability difficulty resides, the extent to which product liability insurance is unavailable, and the question of the feasibility of using federal standards as a defense in product liability cases.

In the course of the discussions, Under Secretary of Commerce Edward O. Vetter said: "It is an unfair world. There are more good questions than good answers."

Among the remedies discussed were the following: rules relating to the basic responsibility of product manufacturers; rules and regulations relating to the use of expert testimony; the question of payment of damages in periodic installments; a mandatory product liability insurance requirement; and a consideration of manufacturer-instituted safety practices and how they may be related to the product liability problem.

In a number of cases, questions relating to prospective remedies involved other questions. The question on the basic responsibility of manufacturers introduced the matter of a limit on the duty of manufacturers, and how this would be defined.

Considerable attention was devoted to a statute of limitations on claims for injuries from the use of products, and how such a statute would be framed. Would such a statute be based on the "useful life" of the product? What would happen if the product were used beyond its useful life, and a person were injured because the product was used after its useful life had passed?

Improper assembly

One point raised was that if a product is assembled erroneously, and a person is injured as a result, is the manufacturer exempt from liability, and is the retailer or other person who assembled it to be held liable?

Jack Sheehan, Legislative Director, United Steelworkers of America, raised a question as to the situation of a worker who is injured by using a product after its useful life had passed. He insisted that whatever provision is made in such a case should not leave the worker in "a vacuum."

Representatives of manufacturers emphasized that product liability claims, and awards made in strict liability cases, had caused astronomical increases in product liability insurance rates to a point where some small companies could not afford insurance, and others were forced out of business. They protested against a system in which a manufacturer could be held liable for injury caused by negligence on the part of a user, or for injury resulting from use of a product that had been resold several times, and had been altered in the process.

Discussion as to whether a "crisis" exists in the product liability area brought from Fred G. Secrest, Executive Vice President, Ford Motor Co., the comment that whether or not the situation was to be called a "crisis" was immaterial, since in truth a highly important problem actually existed.

Secrest said that Ford's product liability claims at the present time totaled 45 times the company's self-insurance for such claims and its reserve set up for the purpose.

There was a considerable discussion of the reform of the tort litigation system. Secrest suggested that a uniform law might be drafted which could be suggested to the states for their adoption.

Melvin Block, Brooklyn attorney, objected to any federal intrusion into the system of tort law, saying it was a matter for the states.

One of the complaints against the present situation, and the sharp advance in insurance rates, was the matter of contingency fees. Suggestions have been made that the contingency fee system should be sharply modified. Block made a spirited defense of the contingency fee, saying it was the means whereby an injured poor person, unable to pay for legal service, could get into court.

Discussion about the product liability rates charged by insurance companies led to talk on the problem of predictability. Edward J. Noha, Chairman of the Board, C. N. A. Insurance Companies, Chicago, said no progress could be made in this matter until the question of predictability had been settled. He stressed the need for more reliable data on various phases of the product liability problem.

Vetter reminded the committee of the importance of assembling reliable data on the various involvements of product liability, and of getting it ready, since legislation on the question will likely be considered by the next Congress.

Vetter emphasized that all persons having material to present for consideration in connection with the product liability problem should do so immediately. He pointed out that the contractors engaged to do basic work on the problem for the Interagency Task Force on Product Liability must submit their final reports by Dec. 3. Vetter is Chairman of the Task Force, which is scheduled to report to the Economic Policy Board in the White House Dec. 15. The Board initiated the Task Force investigation.

Material intended for the Task Force is to be submitted no later than Nov. 15. It should be addressed to the Executive Secretary, Interagency Task Force on Product Liability, U.S. Department of Commerce, Room 2898 C, 14th and Constitution Ave., NW., Washington, D.C. 20230.

Magazine Covers Quality Control Beat

Photographs by satellite, product liability and quality assurance are all covered in the fall issues of *Quality Progress*, the monthly news magazine of the American Society for Quality Control.

For further information, contact Darlene C. Schmidt, Public Information Office, American Society for Quality Control, 161 West Wisconsin Ave., Milwaukee, Wisc. 53203 (414-272-8575).

AND NOW FOR A TRAFFIC REPORT—*An automated vessel-traffic reporting system is under study by an industry-government team for use nationwide. Above, tugs assist the Italian Line container vessel* Americana *docking at Baltimore.*

System Seeks To Pinpoint All U.S. Maritime Traffic

The U.S. maritime industry may be on the verge of developing instantaneous knowledge of the location and status of all vessels using U.S. ports.

Commerce's Maritime Administration is collaborating in an industry-government project which could lead to the first automated nationwide vessel-traffic reporting system for U.S. ports.

Increasing use of fast container and other specialized and intermodal ships calling at U.S. ports has assured widespread interest and cooperation in the standardization and improvement of uniform traffic reporting and projected arrivals.

The 12-month project will survey major port areas to determine current ship-traffic reporting capabilities and information requirements of the maritime and world trade industry, as well as the government.

More than 20 ports and organizations will participate in the project, which will be coordinated by the Marine Exchange of the San Francisco Bay Region.

Commerce's Asst. Secretary for Maritime Affairs, Robert J. Blackwell, called the project "a good example of the creative role of government. When completed, the system will be implemented and operated by industry to produce significant continuing benefits to the entire maritime industry."

Exchange President Paul A. O'Leary said that "with modern telecommunications and EDP services available, it's time to seek nationwide port information exchanges and pooling of intelligence, to meet today's needs for fast, accurate traffic information. Neither government nor industry can suffice any longer with localized, unique intelligence services, which are incompatible among the various port areas. If the effort is successful, we project a common, cooperative system, which will preserve the local independence of marine exchanges and maritime associations—and which will provide them with the benefits of greatly improved data flow.

Tapes Of Quality Control Conference Available

A series of presentations from the American Society for Quality Control 30th Annual Technical Conference, held last June in Toronto, have been taped and are now available to supplement the conference's printed *Transactions.*

Topics include: product liability, technology assessment, supplier evaluation, system standards, quality audit, biomedical trends, quality and management, consumer interests, nuclear quality assurance, international certification, and nutritional standards and labeling.

More than a dozen individual presentations and panel sessions—papers that do not appear in *Transactions*—are offered on ten casette tapes. Individual tapes are $6 each; the full set is $52. Orders must be prepaid. For full details, contact American Society for Quality Control, Dept. PI-140, 161 West Wisconsin Ave., Milwaukee, Wisc. 53203. (Telephone 414-272-8575.)

Public Input Sought On Rules For Coastal Energy Impact Program

A set of billion-dollar rules is being drawn up by a Commerce agency.

Proposed regulations under which states and local governments can qualify for grants under the new ten-year, $1.2 billion Coastal Energy Impact Program have been announced by the National Oceanic and Atmospheric Administration (NOAA).

When adopted, the procedures will outline rules for obtaining assistance to mitigate the onshore impact of new or expanded offshore coastal energy activity, including outer continental shelf drilling, transportation or processing of liquefied natural gas, and transportation or storage of coal, oil, or natural gas.

The primary requirement under the regulations is that a state must now be participating in an approved coastal management program, or must be making satisfactory progress toward achieving such a program consistent with the principles of the Coastal Zone Management Act of 1972.

States that are eligible can expect to receive financial assistance as early as next May. The regulations become effective in January.

NOAA has scheduled a public hearing on a draft Environmental Impact Statement applying to the proposed regulations for November 22 in Washington, D.C., at a place yet to be selected.

The proposed regulations appear in the *Federal Register* of October 22, and public comment will be received until Nov. 22 by the Office of Coastal Zone Management, NOAA, 3300 Whitehaven St., Washington, D.C. 20235.

Publication of the final regulations is scheduled for December.

Resource Guide Issued On Women At Work

Why are women abandoning the traditional "women's jobs" for blue-collar jobs that were formerly the exclusive province of men? A new booklet and film from the Pennsylvania Commission for Women attempts to answer the question, and encourage employers to consider women for jobs in the skilled crafts and trades.

Why Not A Woman? Facts About Women and Work provides facts and statistics on working women, and discusses affirmative action and employment discrimination. The 20-page booklet was produced in conjunction with the Commission's new documentary film *Why Not A Woman?*

To obtain a copy of the booklet, send 26 cents postage to the Commission for Women, 512 Finance Bldg., Harrisburg, Pa. 17120. The film is available on loan.

CONFERENCE TO CONSIDER PRODUCTIVITY IN THE 1980s AS KEY TO PROSPERITY

The productivity performance of the American economy through the 1980s will be examined at a symposium scheduled for November 16-17 in Washington. The Future of Productivity conference is jointly sponsored by the Council on International Economic Policy, the National Science Foundation and the National Center for Productivity and Quality of Working Life.

Attending will be senior officials at the policy-making levels of business, labor and government. They will hear presentations and panel discussions by experts on productivity. The long-range outlook for productivity from national and international perspectives will be explored in relation to human resources development, technology and capital, and the impact of government regulations. Also on the agenda is the potential effect on productivity of changes in supplies of materials and energy.

Chairman of the opening day sessions is John Kendrick, chief economist of the Department of Commerce. Luncheon speaker will be Herman Kahn, president of the Hudson Institute, talking on The Next 200 Years.

Tuesday's program is as follows:

Session I—Productivity Outlook: U.S. Economy to 1985. Speakers are Ron Kutscher, Jerome A. Mark and J. R. Norsworthy of the Bureau of Labor Statistics, Department of Labor; Clopper Almon, professor of economics, University of Maryland; and Edward Denison, senior fellow, the Brookings Institution. Panelists are Douglas Greenwald, vice president-economics, McGraw-Hill Publishing Co., and Markley Roberts, AFL-CIO economist.

Section II—Productivity Outlook: Major Sectors, 1985-90. Speakers are Leroy Quance, program leader, Department of Agriculture; Roger Brinner, economist, Data Resources, Inc.; and Theodore Levitt, professor, Harvard University Graduate School of Business Administration. Panelists are David L. Grove, vice president and chief economist, IBM Corp., and James Wishart, director of research, Amalgamated Meat Cutters and Butcher Workmen of America.

Wednesday's chairman is Donald C. Burnham, director-officer of Westinghouse Electric Corp. and director of the National Center for Productivity and Quality of Working Life. Wednesday's luncheon speaker will be Simon Ramo, chairman of the President's Committee on Science and Technology.

Wednesday's program is as follows:

Session III—Productivity Outlook: U.S. and Foreign Countries. Speakers are Hugh Patrick, Economic Growth Center, Yale University; Angus Maddison, Office of Economic Cooperation and Development, Paris; George F. Ray, National Institute of Economic and Social Research, London. Panelists are Richard Karfunkle, senior vice president and chief economist Lehman Bros. and George Perkel, director of occupational safety and health, Amalgamated Clothing and Textile Workers Union.

For further information about the conference, contact Sue Tietze at the National Center for Productivity and Quality of Working Life, 2000 M St. NW., Suite 3002, Washington, D.C. 20036 (telephone 202-254-9890).

Proceedings of the conference on productivity measurement held in Washington last June will soon be available from the above address.

Another new publication from the Center tells where to turn for advice on how to set up a labor-management productivity committee. The *Directory of Labor-Management Committees* outlines the programs of more than 180 active labor-management committees whose principals are willing to share their experiences.

Improved productivity depends to a great extent on the efforts of labor and management working together to increase efficiency and raise the quality of working life. Labor-management committees are among the means of achieving this cooperation, and have proven useful mechanisms for dealing in a nonadversary setting with a variety of problems affecting productivity and work satisfaction. They provide the opportunity for workers and managers to share their ideas for improving the success of the enterprise and increasing worker satisfaction and job security.

The directory was designed to bring together people or organizations who are interested in forming a committee with experienced groups who already have one in operation. It documents the work of the innovators with a brief description of the program, the number of people involved, and the names, addresses and telephone numbers of persons to contact. Three indexes list programs by type of committee (such as industry, plant, division, etc.), by union and by company.

The directory is a preliminary listing developed from information obtained from the Bureau of Labor Statistics, the Federal Mediation and Conciliation Service, and research by Center personnel. The Center plans to update the directory from time to time as new information becomes available.

The directory contains listings on 113 plants of 89 companies, 147 locals of 96 unions, 49 federal, state and local government agencies, and 19 community-wide programs involving a total of more than 550,000 workers in 33 states.

Single copies are available from Labor-Management Division, National Center for Productivity and Quality of Working Life, address above.

Eight Counties Become Eligible For Federal Funds

Eight counties in five states have become eligible for Federal financial assistance—including loans to private businesses—to help plan and carry out programs to stimulate long-range economic growth and create jobs.

The areas became eligible for the assistance by being designated redevelopment areas by Commerce's Economic Development Administration. They are:

Florida: Citrus and Hernando counties.

Indiana: Ripley and Rush counties.

Michigan: Ottawa County.

Minnesota: Benton and Murray counties.

Mississippi: Warren County.

The designations are based upon high rates of unemployment and make the areas eligible to participate in EDA programs that provide:

—Loans and loan guarantees to help private enterprise expand in areas of high unemployment.

—Planning and technical assistance to help develop local resources to create jobs.

—Grants to help construct public works facilities needed to encourage industrial and commercial growth.

Non-Destructive Testing Symposium Papers Compiled

Those who were unable to attend the Institute of Gas Technology's symposium on nondestructive testing, or those who are unable to read their notes, may be interested in the volume of symposium papers just released.

The June symposium was the third on this subject sponsored by the Institute, and concentrated on steel and plastic pipe systems. The 300-page volume is priced at $25 and is available from George Price, Information Services, Institute of Gas Technology, 3424 South State St., Chicago, Ill. 60616.

NEW UNIT COLLATES SOLAR DATA FOR USE BY PRIVATE DESIGNERS

Another major piece in the nation's emerging solar energy network went into place last month when Commerce's National Oceanic and Atmospheric Administration began operating a calibration facility at its Environmental Research Laboratories in Boulder, Colo.

The facility calibrates and provides quality control for a network of solar radiation measurement instruments at 35 National Weather Service stations, and at a limited number of other sources.

With interest increasing in solar energy as an alternative source of heat and electricity, engineers and architects need to know the amount of solar radiation reaching the earth's surface in order to design solar energy conversion systems. The NOAA network of instruments, which make such measurements, records the amount of solar radiation to accuracies of 5 percent.

The new facility consists of an instrument calibration laboratory and solar radiation measurement unit. The latter contains varied instruments, some of which measure solar radiation throughout the entire solar spectrum while others concentrate on such regions as the ultraviolet, visible, and infrared.

The laboratory will test solar radiation measurement instruments from different manufacturers, so NOAA can calibrate all instruments accurately.

Data from the NOAA instrument network will receive preliminary processing and checking in Boulder before it is transferred to the National Climatic Center in Asheville, N.C. (part of NOAA's Environmental Data Service). Scientists there will add other meteorological data, including temperature, participation, and amount of cloud cover recorded at the same stations simultaneously and will publish the information for use by solar energy scientists, architects, and engineers.

The lab is receiving data from National Weather Service stations in Caribou, Maine; Burlington, Vt.; Boston; Cleveland; Indianapolis; Sterling, Va.; Greensboro; Nashville; Montgomery; Tallahassee and Miami; Madison; Omaha; Columbia, Mo.; Bismarck, N.D.; Dodge City, Kans.; Lake Charles, La.; Midland, El Paso and Brownsville, Tex.; Albuquerque; Grand Junction and Boulder; Lander, Wyo.; Great Falls, Mont.; Boise; Salt Lake City; Phoenix; Las Vegas and Ely; Seattle; Medford, Ore.; Fresno and Los Angeles; and Fairbanks.

First Unit In National Solar Reporting Network Goes On Line In Atlanta

The makings of a national solar energy information system are taking shape.

The first unit in a centralized, nationwide network to monitor the efficiency and performance of solar heating and cooling systems is now operating at the George A. Towns Elementary School in Atlanta.

The data gathering units, called a Site Data Acquistion Sub-System (SDAS), are being placed on selected solar-equipped buildings by NASA's Marshall Space Flight Center as part of the Energy Research and Development Administration's demonstration program for solar heating and cooling.

Demonstration projects at both residential and commercial buildings located throughout the United States and its territories are demonstrating solar systems to stimulate acceptance by the public and the housing industry.

The data gathering network will monitor operation of the solar heating and cooling systems at selected sites by collecting and reporting performance and climatic data. Sensors will measure temperature, humidity, wind, available sunlight, collector inlet and outlet temperatures, flow rates, and the performance of the energy storage system.

Solar system performance reports will be issued frequently to describe information such as solar energy available, solar energy utilized for space heating, cooling and domestic hot water, and other factors which describe the solar system efficiency and possible fuel savings.

Data from each site will be transmitted by a standard telephone line to a central computer system in Huntsville, Alabama, where engineers will analyze and evaluate the solar system's performance. Periodic analytical reports will be provided to the ERDA Technical Information Center at Oak Ridge, Tennessee, for distribution to users.

The centralized network assures a high degree of uniformity of data from widely dispersed sites to facilitate the most meaningful comparison. The SDAS units and the network have been developed and will be operated by the International Business Machines Corporation under contract to NASA.

A large-scale solar system for heating and cooling was added at Towns Elementary last year into the original heating system, with solar collectors mounted on the roof the building.

The demonstration project, which began operating in late 1975, is being conducted by the Westinghouse Electric Corporation and the Georgia Institute of Technology under a cost-sharing no-fee contract with ERDA.

LARGE FIRM'S ENERGY AUDITS HELP 'HAVE-NOTS' CONSERVE ON FUEL

The Federal Energy Administration has commended the Johns-Manville Corp., of Denver for voluntarily assisting other industries in identifying opportunities to reduce industrial energy waste. One of the country's first major firms to identify the importance of an energy audit, Johns-Manville, in response to a request from FEA and its Food Industry Advisory Committee, conducted an intensive energy audit of the meatpacking and baking industries over a six-month period.

The firm spent $150,000 of its own money, providing two experienced five-man audit teams of senior engineering personnel to conduct the pilot audits. Results of the audits showed a range of potential savings of from 12 to 40 percent of total energy used.

FEA says that the lack of energy audit case studies has created special problems for companies unable to afford outside consultants. In volunteering to perform this service for the meatpacking and baking industries, the energy agency said Johns-Manville demonstrated "a commendable awareness of the need for conservation and responsibility to the food industry and the nation."

The end-product of the Johns-Manville energy audits is a compendium of case studies of the meatpacking and baking industries which provides a summary of audit results, recommendations for increasing energy efficiency, a suggested reporting and monitoring system for tracking energy consumption, and illustrative appendices and attachments.

Meatpacking is the food industry's largest single consumer of energy, representing over 9 percent of the gross energy use. The estimated 100 trillion Btu's, or the equivalent of 17 million barrels of oil consumed each year, have doubled in cost in the last three years. The meatpacking industry now spends nearly $664 million for energy each year.

The total energy consumption of the baking industry exceeds 80 trillion Btu's, or nearly 14 million barrels of oil equivalent each year. Energy costs in 1972 were estimated at less than 1 percent of the value of shipments. In the past three years, these costs have doubled with more than $134 million now spent each year on energy alone by the bread and cake sector, and $44 million by the biscuit and cracker sector.

A Study of Energy Conservation Potential in the Meat-Packing Industry, and *A Study of Energy Conservation Potential in the Baking Industry*, will be made available by FEA for purchase from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20401, about mid-December.

PROFILES AVAILABLE OF 35 PRODUCTS UNDER STUDY BY COMMISSION

Thirty-five consumer products will receive priority attention from the Consumer Product Safety Commission during fiscal 1977. The Commission has just announced the availability of profiles on the products, which summarize the basic data from which regulatory decisions on remedial actions can develop.

The purpose in releasing the staff documents is to stimulate greater public participation in the Commission's decision-making process by inviting comment, additional data and analysis from interested organizations and individuals. The Commission does not endorse the specific data, analysis or conclusions contained in the profiles, nor do their contents indicate any determination or foreshadowing by the Commission of a specific course of regulatory or other remedial action.

The profiles represent a new approach to CPSC regulation, and constitute a focal point for the development of the agency's operating plan and budget. They summarize in one document the currently available data, information and analysis developed by Commission staff. Included are basic data on injuries and deaths, hazard patterns, exposure and causality, vulnerability of special population groups; analysis of the projected effectiveness of alternative remedies; and preliminary assessment of economic impact.

The product profiles were prepared by teams representing a cross-section of expertise within the CPSC staff. They will be updated regularly, incorporating new or refined data.

The 35 profiles are grouped into six hazard categories: Fire and burn, poison/chemical, electric shock, mechanical, home structures and systems, and population vulnerability (which refers largely to products used by babies and children).

The product profiles for determining remedial action have been prepared when a product hazard is suspected. They serve as a framework for a decision to undertake remedial action, do further research, or hold in abeyance. They constitute an essential element in Commission priority setting by identifying product specific injury, hazard and socio-economic data collection needs.

For a listing of individual products for which profiles are available, write Bureau of Information and Education, Consumer Product Safety Commission, Washington, D.C. 20207.

Battelle Gathers Data For Arson Information Center

The national campaign to wipe out arson is moving into high gear.

In the latest move of a drive sparked by the dramatic increase in arson incidence and losses in recent years, Commerce's National Fire Prevention and Control Administration (NFPCA) has awarded a six-month, $69,987 grant to the Battelle Memorial Institute to aid in collecting data for use in establishing a national arson information center.

The need for such an information clearinghouse for coordinating an attack on arson was recognized by a recent national leadership seminar conducted by NFPCA's National Fire Academy at Battelle's Columbus, Ohio, Laboratory.

Under terms of the grant, Battelle will provide NFPCA with a cataloged collection of printed material and a coded and indexed file of other data on arson which Battelle personnel will gather from various sources, including several cities where arson countermeasures have proven effective.

The information base provided by the research will support several types of anti-arson efforts, including public awareness programs and training programs in arson detection and investigation for public safety agencies.

Young Americans' Divorce Rate Triples

Proportionally, three to four times as many first marriages are ending in divorce among Americans now in their late twenties as among those of similar age 45 years ago, according to Commerce's Bureau of the Census.

The report shows that 13 percent of the married men born in 1945 to 1949 say their first marriage ended in divorce by the time they were in the 25-to-29-year range. By contrast, only three percent of those born in 1900 to 1904 reported that they were divorced by the time they had reached their late 20's. The corresponding increase for women was from 5 percent to 17 percent. Half of the increase for both sexes occurred during the last 15 years.

The data for this report came from a series of questions relating to marital and fertility history of Americans added to the Bureau's monthly Current Population Survey in June 1975.

The report indicates that few persons marry more than twice. Only about three percent of all persons 40 to 75 years who have ever married have done so more than twice. However, the divorce rate has more than doubled in the last dozen years, from 2.3 per 1,000 in 1963 to 4.8 in 1975.

White adults were more likely than black adults to have been married only once. According to the report, 64 percent of the white men as compared with 53 percent of the black men born between 1900 and 1959 and living in June 1975 had been married once. For women the corresponding proportions married once were over 68 percent for whites and 58 percent for blacks.

Four out of every five divorced persons eventually remarry. Among persons who had reached the age range of 50 to 75 years, the study found that five of every six men and three of every four women whose first marriage ended in divorce had remarried.

Widowed persons are less likely than divorced persons to remarry. Only one-half of the persons in their early fifties in 1975 had remarried after their first marriage ended in widowhood, as compared with four-fifths of those of a comparable age whose first marriage had ended in divorce. The proportion of widowers of this age who had remarried was about 25 percentage points above that of widows (65 versus 40 percent). As a partial consequence, the number of widowers in their early fifties (241,000) was only about one-third as great as the number of widows (774,000).

The report says that most of those who were known to have been divorced had been divorced only once. The data show that of women now in their late thirties who have ever married—those born between 1935-39—75 percent had been married once and never been divorced or widowed; 22 percent had been divorced; and the remaining 3 percent had been widowed.

Other findings in the report include:

- —Most typical ages at first marriage are 20 to 23 years for men and 18 to 21 for women
- —Most typical ages at divorce after first marriage are 25 to 29 for men and 20 to 24 for women
- —The age group between brides and grooms is narrowing
- —Most typical interval is 2 to 3 years from first marriage to divorce
- —Seven years is the median interval between marriage and divorce
- —Three years is the median interval between divorce and remarriage

Data in these reports are from a sample survey and are subject to sampling variability. A detailed explanation of the subjects appears in the report.

Single copies of *Number, Timing and Duration of Marriages and Divorces in the United States: June 1975*, Series P-20, No. 297, are available for 95 cents from the Superintendent of Documents, U.S. Government Printing Office, or Commerce District Offices in major cities.

DEPOSIT OR NO DEPOSIT—*The impact on energy, capital investment and labor of proposed legislation requiring deposits on beverage containers is examined in a new study by the Federal Energy Administration.*

Pros & Cons of Bottle Deposit Legislation Assessed In FEA Study

The Federal Energy Administration has completed a year-long study which examines the energy and economic impacts of proposed national legislation that would require a five-cent refundable deposit on beer and soft drink containers.

FEA has not yet taken an official position on the beverage container issue, pending review of the study.

The study examines specific impacts of a five-cent refundable deposit on all beer and soft drink containers (refillable bottles, nonrefillable bottles and cans), and its effect on the total beverage-related industry.

Three major areas of potential impact are analyzed: (1) changes in annual energy consumption; (2) changes in capital investment requirements; and (3) changes in labor requirements.

The industries that would be most affected by a mandatory deposit include retailers, beverage producers and distributors, container manufacturers, and producers of basic steel and aluminum.

To develop the potential impacts, the report initially projects energy, capital and labor requirements of the beverage industry assuming no deposit legislation is passed. These baseline projections are then compared to projections of what might happen after a deposit law. Results are reported for a 1982 steady-state situation, assuming that: (1) a law would be implemented in the late 1970s; and (2) by 1982, transistory effects will have been dissipated.

Several bills have been introduced in the last few years at the federal level and hundreds at the state and local levels, which would, if enacted, result in some form of government intervention in the beverage industry. At the state level alone, 140 laws are currently being considered for action in 36 states.

The most commonly proposed legislation calls for mandatory minimum deposits (usually five cents) on beer and soft drink containers. Mandatory deposits have been enacted in several states and localities, including Oregon and Vermont. These currently represent, however, only a small share of the national market for beer and soft drinks.

There is intense controversy, the report points out, over mandatory deposit legislation. Proponents of the mandatory legislation support its passage on the basis of the incentive it would provide for container reuse and recycling. The opponents of government intervention argue for consumer sovereignty, and cite the possible economic effects on the industries that would be affected.

Because of its controversial nature, FEA made available about one year ago draft copies of an initial study for public inspection and comment. They were sent to approximately 130 individuals in other government agencies, industry, labor, environmental groups, researchers, and other knowledgeable and interested persons for their critical review and comment. The responses received were incorporated as a part of the final study.

Limited copies of an *Executive Summary* of the report entitled *Energy and Economic Impacts of Mandatory Deposits* are available from the Federal Energy Administration Press Room, Office of Communications and Public Affairs, Washington, D.C. 20461.

The final study, 760 pages, will be available for purchase in the near future from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402.

Direct Iron Ore Reduction Could Have Worldwide Impact

World output of iron through direct reduction, a process which could shift the traditional centers of world steel production, is growing at a rate of 4.7 million metric tons per year.

It could reach a 31.7 million metric ton level by the end of 1980, according to a recent report issued by Commerce's Bureau of Domestic Commerce. The report details the world-wide status and development of the process, and describes specific systems that are currently of interest to the industry. Data in the report were developed primarily by U.S. embassies overseas.

Direct reduction and the conventional blast furnace processes are both used to produce iron from its ores. They differ, however, in that the blast furnace uses coke, produces the iron in a liquid state, and is used chiefly to supply metal to the basic oxygen steel-making furnaces. The direct reduction process uses natural gas, produces the iron in a solid state, and is used primarily to supply metal to electric steel-making furnaces.

This process could affect the demand for metallurgical coal used in the production of blast furnace coke and the demand for ferrous scrap, since direct reduction iron is used in place of scrap as a portion of an electric furnace charge. Also, its development could affect the movement of ferrous materials in world commerce and could bring a shift in the traditional centers of steel production.

Copies of the report are available from the Materials Division, Bureau of Domestic Commerce, Room 2007, U.S. Department of Commerce, Washington, D.C. 20230.

DEMONSTRATION FUEL CELL POWER PLANT COULD BRING COMMERCIAL ONES BY 1980

An electric generating plant that is highly efficient, operates quietly, requires low maintenance, and emits water as a waste product. If this sounds like a utility engineer's dream, it is—but one which researchers at the Energy Research and Development Administration (ERDA) expect to make reality.

Under terms of a $42 million agreement with United Technologies Corporation, South Windsor, Connecticut, ERDA is supporting development and construction of a utility-size fuel cell power plant module. The three-year project consists of two phases: construction of a 4.8 megawatt (MW) fuel cell module demonstration plant, and a subsequent testing phase. The cost of the construction phase is being shared by ERDA ($25 million); the Electric Power Research Institute ($5 million); and United Technologies ($12 million).

Although relatively unknown, especially as a potential source of electricity for homes and businesses, the fuel concept has been around since Sir William Grove first demonstrated the principle in England in 1839. But it took the space program to get the idea literally off the ground and put it to useful work. Environmental concerns and the energy crisis are now bringing the fuel cell concept back to earth.

Energy sandwich

The fuel cell is a sandwich-like device featuring two electrodes with an electrolyte between them. The electrodes are surfaces where electricity is produced. The electrolyte is a "liquid wire" that transports electrons between the electrodes, as in a common auto battery.

Hydrogen, or a processed hydrocarbon which may be derived from natural gas, petroleum or coal, is fed to one electrode and air to the other. The chemical reaction that results produces power without noise or moving parts, with water as a by-product.

Since power is not produced by a combustion process, air pollution is not a problem. Unlike conventional nuclear and coal-fired power plants, which require large amounts of water for cooling purposes, fuel cells may be air cooled with low speed fans. These factors, coupled with their quiet operation make the fuel cell very acceptable from an environmental point of view.

A key advantage of the fuel cell is its modular design, allowing utilities to easily increase generating capacity as demand for electricity increases. ERDA engineers point out that this modular design, along with environmental acceptability, means that fuel cells can be installed much nearer to centers of heavy electricity usage than is possible with conventional plants. This could save distribution costs and reduce power losses in transmission.

Because of their inherent efficiency, fuel cells can deliver up to 30 percent more electricity from a given amount of fuel than conventional systems.

United Technologies has been conducting research on utility fuel cells since 1972 with financial support of nine electric utilities. Support for construction and testing of the 4.8 MW demonstration facilitity marks the first major role by ERDA in fuel cell development.

Northeast Council Gets Pledge Of Commerce Aid

Commerce Secretary Elliot L. Richardson has pledged the Department's support for the Council for Northeast Economic Action, which is being organized to address the mounting job and income problems of the northeast region of the nation.

Formation of the Council was announced by Dr. James M. Howell, senior vice president and chief economist of the First National Bank of Boston, who will serve as its chairman.

The Council will include representatives of government, industry, labor and financial institutions in the region.

Commerce's Economic Development Administration will provide financial and staff support.

John W. Eden, Assistant Secretary of Commerce who heads EDA, said the agency expects to provide more than $500,000 in grants to support the organization's programs. He said an application for approximately $140,000 to assist the Council with administrative expenses is being processed. Eden also expects to provide about $400,000 to help the Council establish a permanent institution representing public and private interests and to sponsor research relevant to the region's needs.

"We anticipate that this new institution will bring together regional decision makers in a collaborative process that will lead to public policies which are more responsive to the economic needs of the northeast," Richardson said.

The Council was expected to hold its initial session this month.

In addition to the establishment of a permanent institution to focus on the economic problems of the area, the Council will review existing economic studies on the region and identify gaps in knowledge about its economic problems. It will consider such economic issues as tax structures, transportation, energy, federal funding, and changes in the industrial base of the northeast.

Energy Costs Take Bigger Bite From New England Manufacturing Plants

It costs more to provide energy for New England manufacturing plants than for other sections of the country.

The average cost to manufacturers for 1,000 kilowatt-hour equivalents of energy was much higher in New England than in other parts of the United States—particularly the Southwest—in 1974.

The 1974 Annual Survey of Manufacturers, recently issued by Commerce's Bureau of the Census, says that the average cost for the 1,000 kilowatt-hour equivalents ranged from $2.59 in Texas to $9.98 in Connecticut during 1974.

Although the price of specific fuels varies from one part of the country to another, the major factor in the great disparity in costs between Texas and Connecticut stems from the different fuels generally used. Much of the energy generated in Texas manufacturing plants comes from the area's abundant natural gas while New England plants generally run on relatively expensive fuel oil.

This "energy advantage" also holds true for other regions of the country over New England, whose manufacturers paid more than twice as much for 1,000 kilowatt-hours of energy during 1974 than did manufacturers in the Mountain and West South Central States.

The report also contains revised national totals on fuels used by manufacturers, and the cost of those fuels in 1974. The total national manufacturers' fuel bill in that year was $19.5 billion, or about 43 percent higher than the year before.

Data on all major fuels consumed for power and heat by manufacturing establishments are presented in the report: coal, coke, distillate fuel oil, residual fuel oil and natural gas. Also included are statistics on the quantity and cost of purchased electric energy and the quantity of electricity generated and used in manufacturing plants.

The report is one of a series of reports with data from the Bureau's 1974 Annual Survey of Manufactures. It provides separate 1974 statistics for the fuels used in each of 451 manufacturing industries. Statistics are also provided for significant industry groups within each state and the District of Columbia. The report presents some data for 1973 and 1972 as well.

Copies of *Fuels and Electric Energy Consumed: States, by Industry Group; and, United States, by Industry*, M74(AS)-4.2, may be purchased for $2.80 from the Subscriber Services Section (Publications), Bureau of the Census, Washington, D.C. 20233, or from Commerce District Offices in major cities.

World's Largest Windmill To Test Practicality Of Large-Scale Wind Power

The largest windmill in history will be built during the next two years in a test program sponsored by the Energy Research and Development Administration (ERDA) and the National Aeronautics and Space Administration (NASA). General Electric and the Hamilton Standard Division of United Technology Corporation will design, fabricate, assemble, install, and test a 1.5 megawatt (1500 kilowatt) wind turbine electrical generating system. The large wind turbine is scheduled to be built in 1978 at a site selected by ERDA from among 17 high-wind locations under study. Although experimental in nature, the system will be located at a utility company site and will supply electricity to the local electric system for use by the general public. The purpose of this test system is to determine the economics and operating characteristics of large wind turbines when coupled to conventional power plants.

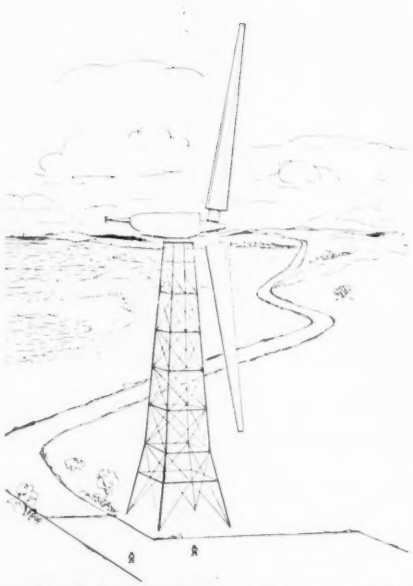
The windmill, to be the largest ever built, will have two slender fiberglass rotor blades spanning 200 feet, perched on a 150-foot tower. The windmill will rotate at 30-40 revolutions per minute in winds of above 11 miles per hour and will reach its full power output at winds of 22 miles per hour. At a site with average wind speeds of 18 m.p.h., for instance, this machine could produce enough energy to supply over 500 homes.

Earlier version abandoned

When completed, the 1.5 MW wind turbine will be bigger than what was the largest windmill in history—the 1.25 megawatt 175-foot diameter Smith-Putnam system built in the 1940's at Grandpa's Knob, a hilltop near Rutland, Vermont. That project encountered some structural problems, but since it could not compete economically with the then low cost of fossil fuels, private funding was insufficient to perfect the system and it was abandoned.

Now, however, with changing fuel costs and the technological advances of the last 30 years, it is believed that significant improvements can be made in wind system capability, economics, and lifetime—factors that are presently the major obstacles to the practical use of wind energy. The initial 1.5 MW systems are designed for locations with relatively high winds, but research is under way on systems for areas with gentler winds.

The largest currently operating wind turbine is the 100-kilowatt 125-foot diameter system built for ERDA by NASA-Lewis Research Center at the Plum Brook test area near Sandusky, Ohio. It is being used to identify and solve technical problems associated with large wind turbines, and will be used in the future to test advanced components.



BIGGEST IN WORLD—*Two experimental 1.5 megawatt wind turbine generating systems to be built by ERDA will be the largest ever made.*

Two more powerful versions of this system will be built shortly to provide information to help in designing the larger machines, and to test the usefulness of this size system to smaller utilities and applications.

In addition to testing large wind energy systems for electrical power generation, ERDA also is investigating and developing small (5 to 10 kw) windmills that could be used by individual rural homes or farms, and performing research on advanced unconventional windmills. Considerably more research and development is anticipated, however, before reliable and large scale utilization of these systems can be contemplated.

Federal Agencies To Use Solar Hot Water Heaters

Three major agencies which account for the great majority of federal facilities across the country are working to determine how and where they can best harness the sun to provide hot water for their many installations.

Federal Energy Administrator Frank G. Zarb said the intent is to make the Federal Government "a customer of solar energy" and thus help reduce the high cost of solar collectors.

In cooperation with FEA, Zarb said, "the Department of Defense, the General Services Administration and the Veterans Administration are identifying specific opportunities for the use of solar hot water heaters in their facilities."

"For the industry," he pointed out, "this could mean several million additional square feet of production over the next few years, more volume which should help lower the cost of production and make solar heated water even more competitive than it is."

Zarb noted that the Department of Defense bases, Veterans Administration hospitals and branches, and General Services Administration-managed office buildings and laboratories, constitute a heavy majority of federally-controlled facilities across the country.

As the three agencies convert to solar water heating wherever feasible they should increase the demand for solar technology, thus reducing costs as mass production techniques are adopted.

"And that means," Zarb pointed out, "less oil and natural gas used to heat water, a growing solar industry, and more jobs for Americans who will be needed to design, manufacture, and install solar equipment."

The FEA Administrator also said steps will be taken to reduce the high cost of installing solar technologies in residential and business buildings by providing adjustments "in the way we build and finance new construction, and renovate existing buildings."

"Twenty-five percent of the energy used in this country goes for heating and cooling buildings, and for heating water," Zarb said. "That means that this nation has a profound economic and political interest in the most economical and secure source of energy to perform these functions. That can be solar energy."

Book Offers Overview Of Merchant Marine

Why does the United States need a U.S. flag merchant fleet? Some of the reasons can be found in a new book entitled *The United States Merchant Marine—A Naitonal Asset*, prepared by the National Maritime Council to provide an understanding of the functions of the privately-owned and operated cargo fleet sailing under the U.S. flag.

The book explains the conditions under which U.S. flag cargo ships must compete in world trade, and the role the American merchant marine plays in national security and the economy.

The National Maritime Council, which consists of all segments of the American maritime industry, U.S. flag carriers, shipyards, maritime-related labor unions and the U.S. government, was established in 1971 to assure importers and exporters the most competitive and dependable U.S. flag ocean transportation system.

Copies of the paper-bound book, priced at $5.95, may be ordered from: National Maritime Council, P.O. Box 7345, Washington, D.C. 20044 (202-377-3325).

Bicentennial Travel By International Visitors Breaking All Records

The 1976 Bicentennial year will be a record-breaker for international tourism in the United States, according to Commerce's United States Travel Service (USTS), if current projections are borne out at year's end.

During the month of July, traditionally a peak tourism month and this year the focal point of Bicentennial celebrations, international visitors to the United States increased by 12.8 percent over the previous July, to a total of 2,525,696. Arrivals from Canada numbered 1.7 million, an 11 percent increase over 1975. Mexican travel to the United States, however, declined 4.4 percent from the previous year. While the increased cost of passports in Mexico may have been a contributor to the decline, July 1975 had been an atypically high travel month for visiting Mexicans.

Visitors from countries other than Canada and Mexico increased 29.3 percent in July 1976 over the previous year. European arrivals increased 34.4 percent, largely the result of rising travel volumes from the United Kingdom (21.7 percent), West Germany (17.5 percent) and France (59.2 percent).

Asian arrivals rose 22.3 percent over the previous year. The volume of Japanese arrivals was 5.4 percent ahead of the 1975 July total. July was only the second month this year in which a rise in Japanese arrivals was recorded.

Australian visitors increased by 47.5 percent, and Venezuelans by 40.1 percent. Visitor arrivals from Brazil declined for the first time this year, apparently the result of restrictions imposed on international travel by that country's government.

Based on the revised international travel forecast, USTS estimates that total international travel receipts for the year could total approximately $6.7 billion, 16.7 percent above the $5.7 billion received in 1975. This includes $5.7 billion which international visitors are expected to spend for travel and purchases while in the United States. The other $1.0 billion is expected to be paid to U.S. carriers by international visitors for transportation to and from the United States. Overall, total travel receipts in 1976 are expected to be somewhat lower than originally projected by USTS, due to the travel-suppressing effects of the devaluation of the Mexican peso.

Should the volume of American citizens traveling abroad develop as anticipated, the U.S. travel account would be in deficit by approximately $3.26 billion. This would represent an increase (4.2 percent) over the travel deficit recorded in 1975.

Calendar Of Business Events

Nov. 9-11—Anaheim — Fifth Pollution Engineering Congress, Convention Center. Contact: Clapp & Poliak, 245 Park Ave., N.Y. 10017.

Nov. 9-11—St. Louis — Clinic on gear manufacturing and processing, Chase Park Plaza Hotel. Contact: Jim Meadows, Soc. of Manufacturing Engineers, 20501 Ford Rd., Dearborn, Mich. 48128 (313-271-1500, x312).

Nov. 11—Appleton, Wis. — Metrication Seminar, Country Aire Restaurant. For information, John W. Wilkie, Fox Cities Chamber of Commerce (414-734-7101).

Nov. 11 — Houston — Fundamentals of microprocessing (first of four Thursday morning sessions). Contact: Rice U., Off. of Continuing Education, Houston, Tex. 77001 (713-527-8101, x2599).

Nov. 12-18—Houston—Soc. of Industrial Realtors annual meeting, Houston Oaks. Contact Robert E. Boley, Natl. Assn. of Realtors, 915 15th St., NW., Washington, D.C. 20005 (202-628-5300).

Nov. 14-16—Andover, Mass. — Prospects for Audiovisual Systems, Institute for Graphic Communication Conference Ctr. For information, IGC, 375 Commonwealth Ave., Boston, Mass. 02115 (617-267-9425).

Nov. 15-16—New Orleans — Proposal Preparation & Source Selection seminar, Royal Sonesta Hotel. For information, AIAA Seminars, 444 West Ocean Blvd., Suite 1403, Long Beach, Calif. 90802 (213-437-7465).

Nov. 15-16—New York—Executive Self-Management seminar, Barbizon Plaza Hotel. Sponsor: The Wharton School. For information, Heidi Kaplan, New York Conference Mgt. Ctr., 360 Lexington Ave., N.Y. 10017 (212-958-7262).

Nov. 15-16—New York—New Products: A Systematic Approach, Barbizon Plaza Hotel. For information, Heidi Kaplan, N.Y. Conference Mgt. Ctr., see address above.

Nov. 15-17—Washington—Program Budgeting, Georgetown Univ. For information, Continuing Mgt. Education, Georgetown U., RCA Bldg.-Education Ctr., 1901 N. Moore St., Rosslyn, Va. 22209 (703-525-6300).

Nov. 15-18—Atlanta—Seminars on management and financing in the construction industry, conducted by Jack Miller. For information, Madeline Graeter, Group Communications, Inc., 6101 Southwest Freeway, Suite 401, Houston, Tex. 77057 (713-664-8818).

Nov. 15-18—Dallas—Computer-Aided Design & Computer-Aided Mfg. Conference and Exposition, Dallas Hilton Hotel. For information, CAD/CAM IV, Society of Manufacturing Engineers, P.O. Box 930, Dearborn, Mich. 48128 (313-271-1500).

Nov. 15-19—New York—Injection Molding seminar, Barbizon Plaza Hotel. For information, Heidi Kaplan, New York Mgt. Ctr., see address above.

Nov. 16—Memphis—14th Annual Business Outlook Conference, Memphis State Univ. Contact: Memphis District Office.

Nov. 16-17—Washington—The Future of Productivity conference, L'Enfant Plaza Hotel. For information, Sue Tietze, National Center for Productivity and Quality of Working Life, 2000 M St. NW., Suite 3002, Washington, D.C. 20036 (212-254-9890).

Nov. 16-18—Washington—Finance & Accounting for Nonfinancial Managers seminar, Georgetown U. For information, see address above.

Nov. 17—Chicago—Institute of Gas Technology 35th Annual Meeting, IIT Ctr. For information, IGT, 3424 South State St., Chicago, Ill. 60616 (312-567-3731).

Nov. 17—Gaithersburg, Md.—Computer Networking Symposium, National Bureau of Standards. Sponsors: NBS & IEEE Technical Committee on Computer Communications. For information, Marshall Abrams, B212 Tech. Bldg., NBS, Washington, D.C. 20234 (301-921-2601).

Nov. 19—Denver—Business Opportunity/Federal Procurement Conference, Executive Tower Inn. Sponsor: Sen. Gary Hart. For information, Lon McCain or Kathie Capra, c/o Sen. Hart, 1200 William St., Denver, Colo. 80218 (303-837-4421).

Nov. 22—Woodbury, Long Island, N.Y.—What You Need To Know About the New Tax Reform Law, Fox Hollow Inn. For information, Long Island Assn., 131 Jericho Tpke., Jericho, N.Y. 11753 (516-333-9300).

Nov. 22-24—Miami—Manufacturing Management for Multi-Plant Operations seminar, Doral Hotel On-the-Ocean. For information, Heidi Kaplan, N.Y. Conference Mgt. Ctr., see address above.

Nov. 23—Bowling Green, Ky.—Metric Workshop, Bowling Green-Warren Cty. Chamber of Commerce. Contact: Memphis District Office.

International Commerce Report

Port Plans In Mideast Attract U.S. Expertise

SEMINAR PARTICIPANTS REPORT BUSINESS PROSPECTS iN SAUDI ARABIA, EGYPT, MOROCCO

Heavy port congestion in Saudi Arabia, and planned expansion of port operations in Egypt and Morocco—resulting in part from mushrooming imports—are increasing demand for construction equipment and cargo delivery systems.

Seven U.S. industry leaders, conducting technical seminars last month in Dhahran, Jidda, Alexandria, and Casablanca, found substantial interest in the equipment and services offered by their firms.

Nine of these technical seminars were conducted by the Commerce Department for January-September of this year in various international markets. The seminars are focused around a selected technology that represents a marketing opportunity for U.S. industry. Practical, problem-solving presentations by representatives of the participating U.S. firms are the keynote. Business resulting from contacts made during the sessions is projected at multi-million-dollar levels.

The recent port development seminar was conducted under the chairmanship of Armour S. Armstrong, Director of Port Development for the Commerce Department's Maritime Administration. The participants presented papers on port consulting and engineering, communications and control equipment, shipyard service and repair systems, mobile self-elevating cargo handling berths, anti-pollution equipment, anti-corrosion materials, and industrial trucks in the stevedoring industry. Government port officials in the countries visited contributed to the discussions. Many contacts made during the meetings are likely to be productive as long-range undertakings are pursued.

The Saudi Government's port expenditures are expected to reach $7 billion in the next three years. Drafters of the country's current five-year development plan recognized that its success, in terms of sectoral targets, would rest to a large extent on the amount of cargo that could be passed through the country's major ports of Dammam and Jidda. Last summer, for example, at Dammam, general cargo was having berthing delays of as much as 90 days.

By year's end, many kinds of improvements were under way, as steps were being taken to open traffic lanes, modernize operations, and expand facilities. As a result, more cargo is passing through the port than ever before, yet many bottlenecks remain. Interest here centered especially on cargo delivery systems—equipment, manpower, supporting services—covering all phases of transfer from ocean-going vessel to inland delivery point.

In Egypt, plans are under way for development of the ports at Alexandria, Damietta, Dekheila, Safaga, Said, and Suez, and for the widening and deepening of the Suez Canal. This concerted effort points to business opportunities in design, consulting, engineering, construction, and equipment sales.

Morocco's current five-year plan provides for expansion of the ports of Casablanca and Mohammedia and the fishing port of Nador on the Mediterranean, and construction of a new port at Jorf El Asfar. Some $150 million is to be spent on the Casablanca port, for which various kinds of cranes, trucks, loaders, and lifts will be required. For Mohammedia, tenders are expected to be announced toward year's end; jetty expansion and pier construction are scheduled to begin in mid-1977.

Companies participating in the seminar were: Eaton Corp., Philadelphia; Everseal Mfg. Co., Inc., Ridgefield, N.J.; General Electric Co., Lynchburg, Va.; Hydranautics, Coleta, Calif.; Marathon Le Tourneau, Longview, Tex.; John J. Mc Mullen, New York; and Seaward International, Falls Church, Va.

AT JIDDA PORT—*Seminar members watched from a few hundred yards away, as a U.S.-made helicopter (below) unloaded cement from a barge. This unusual chopper operation, the major part of which calls for unloading directly from ships, can move 2,000 tons a day. Photo at right: Director of Port Authority of Jidda (center), other officials at seminar reception.*

Multilateral Trade Negotiations

This article is another in a series of progress reports on the multilateral trade negotiations, prepared by the Commerce Department Office of Int'l Trade Policy.

GENEVA

The **MTN Tariffs Group** met Oct. 13 and 14 to receive tariff reduction formula proposals from Japan and Switzerland. The Group had earlier received the proposals of the U.S. and the European Community (see *Commerce America,* April 12 and Aug. 16).

Japan proposed the formula $Z = 0.3X + 3.5$, where Z is the final reduced duty and X is the current duty. Japan stated that it had industrial products in mind in proposing the formula, but that tariff reduction offers on agricultural products ought to be made in line with the formula.

Switzerland proposed the formula $Z = 14\ X/\ (X+14)$, where Z is the final reduced duty and X is current duty. Switzerland said that its formula ought to apply principally to industrial products but, like Japan, did not rule out its application to agricultural products.

Both formulas are designed primarily to "harmonize" tariffs, i.e., reduce higher tariffs by greater percentages than lower tariffs. The Japanese formula, however, would not apply to tariffs at or below 5 percent.

In its comments on the two proposals, the United States reiterated its position that the tariff reduction formula should apply to both industrial and agricultural products. The U.S. noted that 75 percent of developed country tariffs are in the range of 15 percent or less. In this range, where most trade flows, both formulas fall short of the reductions which would be made by the U.S. formula of $Y = 1.5X + 50$, where Y is the percentage reduction up to a maximum of 60 percent, and X is the current duty. In comparison to the Community formula, a four-step process of calculating the final duty, with each step involving a reduction of the tariff by its own percentage, the Swiss formula would result in deeper cuts at all tariff levels. The Japanese formula would result in marginally deeper cuts of tariffs between 8 and 27 percent, but would result in lesser reductions at all other tariff levels. For example, the four formulas would reduce a 10 percent tariff to a final tariff as follows: U.S., to 4 percent; Swiss, to 5.8 percent; Japanese, to 6.5 percent; the Community, to 7 percent.

The U.S. pointed out that the Japanese formula would, from the start, fail to reduce about 17 percent of developed country tariffs by not reducing duties 5 percent and below. The U.S. was strongly supported in this criticism by other delegations. The U.S. also noted that both the Japanese and Swiss formulas would result in overall cuts in developed country tariffs considerably smaller than would be achieved by the U.S. formula.

With regard to exceptions to a tariff cutting formula, the U.S. reiterated its March position that all countries should use "maximum restraint to minimize exceptions." The consensus was that countries should exercise maximum restraint in taking exceptions to whatever formula is adopted.

The tariff reduction formula and rules and procedures for exceptions make up two of the three elements of the tariff negotiation plan. The Group also discussed the third element, special and differential treatment (S&D) for less developed countries (LDCs). Primarily, LDCs want the Group to agree in principle to a number of S&D measures which would result in provision of more favorable treatments of products of interest to them. The next meeting of the MTN Tariff Group, scheduled for Dec. 15, will focus on this issue. Agreement on a tariff cutting formula, adoption of rules and procedures for exceptions, and selection of S&D treatment for LDCs are not expected before early 1977.

At the **MTN Sectors Group** meeting Oct. 12, the Canadians proposed a round of bilateral and plurilateral discussions in order to set out in detail their specific proposals for dealing with nonferrous metals (lead, zinc, nickel, copper, etc.) and forest products in a sectoral context. The Canadian proposal seeks a liberalizing of trade in these products which would go beyond the general negotiating approach, and attempts to expand trade for processed and finished products under stable conditions. Although several countries expressed reservations about the appropriateness of the sectoral approach in general, the Group agreed to the Canadian request for informal discussions.

The U.S. reaffirmed its intention to present a sectoral negotiation proposal for steel at a future meeting of the Sectors Group. Also discussed at the meeting was a feasibility study prepared by the GATT Secretariat on handling handicrafts as a separate sector. Following a suggestion by India, the Secretariat agreed to compile additional data concerning handicrafts. While commending the Secretariat on the work it has done in compiling data concerning sectors of interest to various countries, including electronics, chemicals, and heavy electrical equipment, the Group delayed substantive discussion of the data until the next meeting.

Government procurement practices were the focus of discussion in two separate international forums during October. In the Organization for Economic Cooperation and Development (OECD), the **Trade Committee Working Party** held its first substantive discussions on this subject since December 1975.

The OECD unit had an exchange of views on outstanding issues in its draft government procurement code, but progress was limited in overcoming what are considered rather basic differences on certain code provisions. A report was approved on the status of the OECD work on government procurement for transmittal to the GATT Secretariat.

The **GATT Nontariff Measures Subgroup on Government Procurement,** at its first meeting Oct. 20, considered organizational matters and took preparatory steps toward starting substantive work on government procurement issues early next year.

The U.S. noted that much work has gone into the development of the OECD draft government procurement code and that the Subgroup should review the work of the OECD, including the code itself.

The Subgroup also requested the GATT Secretariat to compile a list of topics related to the government procurement issue for inclusion in its work program.

The less developed countries emphasized their interest in including this topic within the MTN and in receiving special and differential treatment (S&D) as part of developed country procurement practices.

The **MTN Tropical Products Group** concluded its sixth meeting Oct. 20 with agreement that offer-making countries should work toward implementation of concessions by Jan. 1, or as soon thereafter as consistent with domestic procedures.

The Group agreed that offer-making countries should notify details of their concessions and plans for implementation to the GATT by Dec. 15 or the earliest possible date thereafter.

As noted previously in these articles, the United States has taken the position that contributions by the LDCs will be necessary for the U.S. to implement its offers.

Within this context, a number of bilateral and plurilateral consultations are expected to take place before the Group next convenes. It is believed that these consultations may offer the opportunity of narrowing some of the differences now existing between the developed countries and the LDCs on the question of contributions. The time of the next meeting is to be determined by the Group's chairman and interested delegations.

OVERVIEW AT THESSALONIKI—*U.S. exhibits at this annual international event attracted record crowds and netted sales that topped those of earlier years.*

Thessaloniki Fair Draws Middle East Customers; U.S. Results At Record

The new strategic position of Greece relative to Middle Eastern commercial affairs was reflected in the record success last month of U.S. participation in one of that country's major international fairs.

A gap has been created by the scattering of the Beirut-centered Middle East international business community, and Greece to a large extent seems to be filling this gap. The 41st Thessaloniki International Fair drew noticeably wider attendance, including representatives from major Middle Eastern and North African countries and East Europe.

Topping all previous U.S. participations in this annual fair, American companies recorded more than $500,000 in floor sales, and estimate orders in the next 12 months at almost $15.4 million. Even more significant are the ten representatives appointed by the U.S. firms during the fair, plus another 13 under negotiation at its close. One company alone reported new "market penetrations" for Egypt, Kuwait, Algeria, Sudan, and Libya.

Among the products displayed at the U.S. pavilion, where attendance was 67 percent over that of 1975, were agricultural tractors, aircraft, earthmoving equipment, automobiles, computers and software, instant cameras, vending machines, calculators, and plastics. The local agent for Harley Davidson Motor Co., which exhibited for the first time in the U.S. pavilion and reported impressive floor sales, said, "Very pleased. Harley Davidson will participate in 1977 with larger space." Joy Manufacturing Co.'s generating and construction equipment also had its first exposure in Greece. The firm reported 12 excellent leads and good sales prospects, and hopes to participate in 1977 in the outdoor area.

The American Motors display of Pacer and Jeep automobiles attracted considerable attention. Atlantic Motors, local representative of AM, reported that the company would participate next year "with larger space indoors and an outdoor area." Ford introduced a heavy-duty truck model and large agricultural tractor, selling two units during the fair. Condellis S.A., Ford's local representative, predicts 12-month sales of almost $400,000 as a direct result of its outdoor exhibit.

EXHIBITION IN AMSTERDAM UNDERSCORES MARKET FOR U.S. WATER EQUIPMENT

A substantial and rapidly growing European market for water-use equipment helped to make a U.S. exhibition one of the highlights of AQUATECH '76, a major international water equipment exposition held in Amsterdam this fall.

Rising concern about water quality, widespread implementation of stringent legislation, the recent drought in many parts of Europe and Africa, and agreement among 12 nations to fight pollution in the Mediterranean Sea—all have heightened interest in equipment for pollution control, irrigation, desalination, and conversion.

The 23 U.S. exhibitors during this year's biennial event recorded sales of $2.4 million and have projected sales for the next 12 months at $11.8 million. In addition, 55 licensing, joint venture and representation agreements were concluded, and another 136 are still under active negotiation.

In 1975, the Netherlands, Belgium, France and Germany alone spent an estimated $650 million for water purification and pollution control equipment and instrumentation. Their investment in such products is expected to exceed $2.6 billion during 1976-78.

Diversity was the keynote of the U.S. exhibition. The products displayed ran the gamut from pipes and pumps to complete purification systems and represented the latest technological advances. Many items had not been exhibited in Europe before—a situation which, coupled with a high regard for American expertise, further enhanced interest in the U.S. displays.

Of the several hundred firms participating in AQUATECH '76, the majority were from the United States and Europe. For the first time, however, AQUATECH was held in conjunction with the Interna-

POINTERS FOR NEW AGENT—*George Brown, U.S. exhibitor at Aquatech '76, explains to one of his newly appointed agents exactly what would be expected of him.*

tional Water Supply Congress, and visitors to both events came not only from Europe but from Africa and the Middle East.

Earlier this year Spain, France, Monaco, Italy, Greece, Egypt, Lebanon, Morocco, Israel, Turkey, Cyprus, and Malta signed a convention committing them to take all measures to combat pollution of the Mediterranean. They agreed to establish joint programs to monitor the level of pollution and to fight against dumping from ships and aircraft as well as against discharge of harmful matter from coastlines. As these steps are taken, demand for equipment will increase.

BUILDING SALES PROSPECTS—*Jack Smith (right), president of Truswal Systems, Inc., a new-to-market firm at Paris U.S. Trade Center show, expects to sell about $1 million worth of his roof truss assembly equipment here during the next 12 months.*

U.S. Exhibitors In France Find Favorable Market For Building Equipment

Building and construction equipment and supplies proved to have a profitable market for the 33 companies that participated last month at the U.S. Trade Center exhibition in Paris.

Twenty-five exhibitors were new to the French market and used the opportunity to gage product acceptance as well as generate sales and representation leads in Western Europe. Nineteen firms expect to conclude agreements with one or more agent/distributors in the next 12 months, and the sales expectations of all exhibitors during this same period are over $9 million.

The French building industry is very receptive to American products that are quality and price competitive. Government officials have mandated the renovation of a large number of sub-standard residential buildings and the installation of efficient heating insulation and energy conservation of all types throughout France. Additional market opportunities exist with the creation of all-electric homes, the development of new coastal and mountain holiday/tourist resorts, public works expansion, and do-it-yourself products.

Show In Singapore Confirms Southeast Asian Interest In Computer Technology

The record response to a recent U.S. Trade Center computer exhibition in Singapore reflects an increasing interest by government, business, and industry in computer technology, making the prospect for U.S. sales brighter than ever.

The exhibition generated more than $500,000 in floor sales and presages some $4.5 million worth of orders for computers and peripheral equipment in the region. More than 13 percent of the registered visitors were from Asian countries outside Singapore.

"During my ten years in this business in this area," said one of the 17 participants, "I have not seen such a good response and support to this sort of exposure."

The show was scheduled to coincide with the First Southeast Asia Computer Conference, which brought together government officials and end users from neighboring nations. Many conferees visited the exhibition and were impressed by the wide range of equipment—much of which is not yet available in their own countries. Several exhibitors reported potential sales to government agencies in Singapore, Indonesia and the Philippines.

The Commerce Department has forecast an annual growth of at least 25 percent in the export of U.S. computers and peripheral equipment to Singapore through 1978. Much of this growth is expected to occur in the use of mini- and micro-computers. A projected average annual growth of $1.3 million in the Singapore computer market is expected to generate $12 million in annual sales by 1980. The market for computer related equipment is slated to grow to $8 million annually by the same year. With a better economic outlook for the country, these estimates could easily be exceeded.

The recently acquired larger premises for the Singapore Trade Center also contributed to the success of the exhibition. The more spacious ground floor exhibition hall at the new Center, an increase in area of 42 percent over the previous premises, provided for more comprehensive displays than had been previously possible.

New International Shows Set For Singapore In 1977

Two new international exhibitions are scheduled to take place in Singapore next year: The International Boat Show, June 17-22; and the International Exhibition of Materials Handling & Construction Machinery, Oct. 5-9. Each is the first of its kind in the Southeast Asian region. For additional information, contact the organizers: International Fair Promotion and Marketing Services Pte. Ltd. (INFAMA), 51-A, Factory 4, Kampong Bugis, Singapore 12; telephone, 2588276; cable, INFARPROM.

COMPUTERS TALK IN SINGAPORE—*Equipment exhibits drew attentive customers during recent U.S. regional Trade Center show, where floor sales alone reached $500,000.*

Doing Business In Nigeria Sometimes Complicated, But Rewards Can Be Worthwhile

Although the pace will ease, the Nigerian economy is expected by the U.S. Embassy in Lagos to show continued impressive growth.

A February coup attempt shook confidence and caused a reassessment of national goals and resources, but economic development remains the government's top priority, and the new budget demonstrates that development will now be approached with a more realistic understanding of the country's limitations. Oil revenues have risen in recent months, and a high level of business activity should be maintained. Imports approached $6 billion in 1975 and should continue to climb, despite government discouragement of nonessential items, to over $11 billion annually in 1979-80 as anticipated by central planners.

This broad export market and the prospects offered by an ambitious development plan make Nigeria an important market for American goods and site for consideration of American investment.

Nigeria's commitment to rapid development, however, brings associated problems. Inflation continues at an annual rate approaching 50 percent, and its varied causes such as shortages of goods and monopoly conditions in some sectors of the economy are beyond the government's short-run control. Port congestion, while lessened by strong government measures, will continue to constrain growth until expanded facilities are completed in the next five years. Food production still lags behind demand, and the country's import bill, which is almost four times greater than it was three years ago, contributed to a deterioration in Nigeria's balance of payments position in 1975 relative to 1974.

Nevertheless, the Third Development Plan, even if scaled back, will continue to call for enormous investment spending in the industrial, transportation and social sectors and should stimulate solid economic growth affording important opportunities to foreign business.

The dimension of growth and the challenge of grappling with it are exemplified by the words of an American communications representative: "One goes along a road traveled a year or two ago and finds a new town of 50,000-100,000 people, not even on the map!" In the past year the achievements of U.S. firms have shown an increased sophistication, alertness and knowledge of marketing in Nigerian conditions. There has been more sustained sales effort, more and longer visits from abroad, and the establishment of a score of new local offices.

Sales rose, but share fell

Not surprisingly, U.S. exports to Nigeria rose from $346 million in 1974 to $681 million in 1975, a 97 percent gain. At the same time, however, the U.S. share of Nigerian imports declined from 12 to 11 percent. American firms in such fields as port decongestion and telecommunications have mastered complicated bidding procedures and won contracts, but other contracts have been lost to aggressive, cost-conscious foreign companies who maintained a continuing presence in determined pursuit of projects.

U.S. exporters will find that Nigerians have a keen appreciation for American products and services. They should be especially alert to a number of developing fields. The first large purchases of American trucks by the Nigerian Government in over a decade and a crucial reshuffling of local distributors for several leading lines of American automobiles are spearheading U.S. vehicle penetration of the Nigerian market. This penetration can be reinforced and widened by more marketing activity on the part of U.S. car, bus and truck manufacturers and by producers of automotive accessories/parts and service/repair equipment.

The Universal Primary Education (UPE) program, a vital activity because only approximately 12 percent of school-age children now attend school in Nigeria, has begun. The program requires extensive inputs ranging from visual aids and textbooks to classrooms and teachers' colleges.

In the transport sector, both Nigerian Railways and Nigerian Airways are approaching extensive overhauls and acquisition of new equipment. In power generation extensive areas of Nigeria have no source of electricity except for portable generators; U.S. firms could show more initiative in this category. Agriculture needs all kinds of implements from hand tools to medium tractors. Output generated by "Operation Feed the Nation" has spurred interest in cold storage facilities.

Government accent on increasing protein intake has repeatedly pointed to the fishing sector. Here about ten companies are actively engaged and offer a sales potential for fishing boats, storage and processing equipment. There also appear to be good opportunities for sales of water craft in Lagos and other port cities. Communications equipment of all types remains in high demand.

There is a visible surge in consumer goods potential. In the past few months two of the leading wholesale-retail networks in Nigeria have turned to the U.S. Embassy to express interest in buying a gamut of American-produced items. Competition is strong from Japan in electronics and electrical appliances and from the United Kingdom and Sweden in tools. Nonetheless, in most consumer categories the United States should be able to present a forceful competitive presence. Excellent potential looms in franchising operations, especially in automotive repair, shoe repair and fast-food restaurants.

Design, engineering, and construction firms can compete for an impressive array of projects including downstream petroleum projects, railroad, highway and bridge construction, hydroelectric plants, steel mills, irrigation systems, school and hospital construction, housing developments and water and sewerage systems. The building shortage, felt by both public and private sectors, calls for extensive, accelerated programs, and there are more

CONFERRING IN LAGOS—*M. F. Biggs, of E-Systems—Montex Div., Salt Lake City, talks with technical staff of the Nigerian Ministry of Transportation during visit of U.S. Aviation & Ground Support Equipment trade mission early this year.*

calls for prefabrication to solve the impasse. Producers of prefabricated structures face a market ranging from temporary quarters for construction site workers to permanent school, office and factory complexes. There are also opportunities in a wide range of consulting projects.

To achieve and sustain the level of economic activity called for in the Third National Development Plan, Nigerian planners have acknowledged the need for a large influx of foreign technical and specialized manpower, and the government has promised its cooperation in assisting these people to enter the country. At the same time the government remains committed to a strong Nigerian participation in development.

The Enterprises Promotion Decree, first issued in 1972, was revised in June 1976 to increase Nigerian participation in local business activities. All enterprises must now have full or partial Nigerian participation. New Schedule I identifies those types of enterprises which must have full Nigerian participation. New Schedule II lists those enterprises which are reserved for 60 percent Nigerian participation. Enterprises covered by new Schedule III are reserved for 40 percent Nigerian participation and include all business activities not listed in Schedules I or II.

Other factors are important

Knowledgeable Nigerian spokesmen point out that the money which the U.S. partner puts into the business arrangement is not the crucial and only factor; equally important are the management and responsibility elements contributed.

The government is especially desirous of attracting industries which will bring new technology, utilize local raw materials, and import the expertise necessary to allow Nigerians to move quickly into upper level technical and managerial positions.

Suppliers should be aware of the increasingly strong emphasis being put, especially by the government, on the training component of any sales transaction. Proposals for furnishing both goods and services should treat this aspect fully. For example, when one branch of the government recently purchased vehicles, provision was made for extensive training of mechanics and drivers in the United States. On construction projects, bidders must provide for instructing local workers in skills. In all businesses, Nigerian employees are expected to learn and then practice management.

Another aspect of doing business in Nigeria is taking the time to explore and follow up repeatedly on trade opportunities. Negotiation is often protracted and the dimensions of a possible sale or project can be slow to be revealed. Ideally this situation suggests that an American or local representative of a U.S. firm remain on the spot to pursue a bid to its completion. This in turn shows the need for the U.S. company to expend time and effort to find competent Nigerian agents with initiative and persistence.

Doing business in Nigeria has its special complications. The groundwork necessary to consummate a business deal may be in excess of that required elsewhere, misunderstandings and frustrations are frequent, long delays are common. Balancing these factors are a large and growing market and the promise of good return on investment. For the American business person willing to accommodate to Nigerian practices and to accept the complications of doing business there, the rewards can be worthwhile.

Panama's Underlying Demand Seen Boosting Import Level Once Economy Is Righted

Constraints arising from slower economic expansion, lack of private business sector response to government efforts to stimulate the economy, and a decline in Canal activity retarded Panama's import growth in 1975 and resulted in an absolute decline during the first six months of 1976. Domestic imports grew in value by less than 10 percent in 1975 and declined 17 percent during the first six months of 1976. Imports into the Colon Free Zone for the first six months of 1976 declined 3 percent from last year's level.

John W. Stahlman, Commercial Officer at the U.S. Embassy in Panama, expects imports to rebound once the economy resumes its traditional growth, however. He notes that, unlike many developing countries which imposed restraints on imports and foreign exchange to insulate their economies against the impact of oil price hikes since 1973, Panama has retained its liberal trade and monetary policies.

The import market in Panama passed the billion-dollar mark in 1974 and reached about $1.2 billion in 1975. This combined total of an estimated $700 million in domestic imports and about $500 million Colon Free Trade Zone imports ranks this small country (1.7 million population) ahead of its Central American and Caribbean neighbors in market size. U.S. suppliers continue to supply 40 percent of non-petroleum exports to this compact market.

Elements of demand

Additional factors cited by Stahlman as helping to generate strong demand for imports: an ambitious development program, relatively high per capita income, a heavy dependence on foreign goods due to limited local resources and manufacturing, and a U.S. citizen community estimated at 20,000 in Panama and in the Canal Zone. Imports are facilitated and stimulated by this country's utilization of the U.S. dollar as a medium of exchange, the presence of a large regional banking center, the Colon Free Zone, and an active tourist trade. Demand arises also from Panama's position as a hub for land, sea and air routes. Fueling and provisioning of steamships and to a lesser extent aircraft and fishing vessels have become lucrative activities. Substantial demand stems from procurement in Panama of goods and services by U.S. Canal Zone military and civilian establishments.

Economic outlook uncertain

An economic slowdown, accompanied by higher import prices—especially for petroleum—a sharp cutback in construction activity, and an exhausting of import substitution opportunities persisted through the first half of 1976. Real economic growth rates, that during the 1960s and early 1970s had averaged 8 percent annually, during 1974 dropped to 2.6 percent and in 1975 to 1.7 percent.

Since October 1973, government decrees and actions affecting real estate (both urban and rural), labor-management relations and agricultural marketing have eroded the private sector's confidence in its future role in the economy. This, combined with the economic recession and tighter bank credits, has made investors and businessmen reluctant to assume medium to long-term commitments.

At the same time, local procurement by the Panama Canal Company and Canal Zone agencies has leveled off. Higher costs and reduced ship transits via the Canal are forcing the Company to adopt austerity measures in an attempt to reduce a widening gap between operating revenues and expenditures.

The slowing tempo of economic growth during 1974-1975 threatens to turn into stagnation during 1976. The economic picture is further clouded by the plummeting world market price of sugar, which has resulted in a 50 percent drop in export earnings from a commodity that was expected to be Panama's leading money-maker (excluding reexports of petroleum) during 1976 and to considerably improve the balance of trade when three new mills come on line in early 1977.

The agricultural sector has been hard hit by a serious drought during the spring and summer of 1976, making it

FINAL LINK IN PAN AM HIGHWAY—*Tropical rain forest yields to construction workers carving new IADB-financed road through Panama's Darien Gap. (Inter-American Development Bank photo)*

unlikely that the only sector of the economy to demonstrate significant growth in 1975 can provide a repeat performance this year.

Persistent slowdown

Elsewhere, signs of economic arrest persisted through the first half of 1976. Construction activity remains severely depressed despite stepped-up government investment in highways, secondary roads and other development projects. The value of building permits issued during 1975 was about half the 1973 level of $97 million. Permits for private construction fell more sharply—from over $83 million in 1973 to about $28 million in 1975.

The situation is even grimmer in 1976—a majority of the low-cost government housing projects that maintained activity at a subsistence level during 1975 have been completed, and additional government housing expenditures have not been forthcoming. Accordingly, the volume of building permits issued in the Panama City-Colon metropolitan corridor declined 60 percent during the first six months of 1976 from the corresponding period of 1975. These data apply to the area around Panama City, which accounts for about 80 percent of the country's construction activity.

Manufacturing activity remains stationary in the face of rising costs and decreasing demand. General commercial activity sagged last year and continues in the doldrums during 1976. Tourism, which grew steadily through 1974, seems to have stabilized—hotel occupancy figures are down and several projects that were initiated to take advantage of the expected tourist influx are experiencing financial difficulties.

Prospects of a resumption of economic expansion at the high rates attained through 1973 depend heavily on the government's ability to secure additional financing for new projects included in the 1976-1981 Five-Year Plan and to restore private sector confidence. Panama has demonstrated a unique ability to secure funds for development projects and for refinancing commercial debt. The establishment of an effective planning ministry five years ago facilitated stepped-up loan approvals by international development assistance agencies. Now that the slack in lending to Panama has been taken up vis-a-vis other recipient countries, the rate of new loan approvals is expected to be slower.

Private bank financing will also taper off unless the Panamanian economy provides some evidence that it is emerging from its current lethargy. Meanwhile, current revenues appear to be heavily committed to servicing the existing public debt of $1.1 billion, and, with the help of additional borrowing, to maintaining programmed development activity.

In January the government acted against a number of businessmen for criticism of its policies and an alleged plot against it. Representatives of both government and the private sector held several meetings to reconcile differences and improve government-private sector communication. Advisory commissions were set up to facilitate an ongoing dialogue.

More recently, the government has been faced with student demonstrations protesting recent increases in the retail price of rice and milk, an increase necessitated by the agricultural sector's losses during the recent drought.

Shift to capital goods

With the softening of private demand for consumer and capital goods, and an acceleration of government project requirements, the composition of imports has shifted toward machinery, equipment and supplies for development projects. This shift is expected to continue through 1976.

The $473 million 1976 development budget released in January is the key to import requirements for government projects. It should be noted, however, that the budget is heavily dependent on loans ($122 million) and supplier credits ($150 million), not all of which are assured. The three new sugar mills already under construction have been earmarked $203 million. The new Tocumen International Airport, Vacamonte fishing port, Colon container port, final work on the Bayano Hydroelectric Project, and initiation of the La Estrella-Los Valles and Fortuna hydroelectric complexes and the Calzada Larga cement plant and smaller projects are to receive $157 million. Funding for health, education and low-cost housing projects is projected at $110 million.

By far the largest project in the offing is the Cerro Colorado copper mine, which would require an estimated $800 million for mine, smelter and related facilities. The successful completion in January of contract negotiations between the government and Texasgulf, Inc. on a joint venture brought exploitation one step closer, with the final feasibility study on the mine scheduled for completion in early 1978.

In order to realize contract and sales opportunities represented by these projects, U.S. firms will need to ensure that they are represented locally by energetic Panamanian agents. Due to a scarcity of project financing and a desire to maximize local contractor and supplier participation, government procurement tends to be subdivided into relatively small amounts. Short lead times for bidding often result from efforts to keep projects on schedule.

Free Zone success continues

The success of the Colon Free Zone as a reexport base for goods valued at nearly $500 million annually demonstrates this facility's utility as a center for regional sales or shipments. Free Zone firms have capabilities for servicing Latin American markets which few companies can hope to duplicate. Their bilingual sales and shipping personnel have long experience in dealing with the myriad trade controls and requirements of the 25 regional countries. U.S. exporters are urged to investigate the advantages of collaborating with a Free Zone firm or establishing their own operations there.

New sales opportunities are envisioned under two new regulations adopted last December to stimulate tourism, trade and transport. Law No. 67 exempted from both duty and a 6 percent surcharge a long list of luxury consumer goods, including perfumes, jewelry, woolens, silks, linens, optical and camera equipment, small radios, watches, clocks, carpets, and some interior decorating items. Small calculators and radios ($60-$80 range) were also exempted from duty. This law also cut to 5 percent the tariff on consumer electronic equipment. The second new regulation removed duties on fuels, lubricants and repair parts for commercial vehicles.

Uruguay's Old Trade Patterns Are Breaking Down, Letting New Suppliers Enter Market

The most salient characteristic of the Uruguayan economy during the last two decades has been stagnation of production accompanied by high inflation and a decline in real purchasing power. However, fundamental changes in the country's prospects are now being brought about by reform of the economic system, according to the U.S. Embassy in Montevideo.

The new approach was conceived in 1973 when the Uruguayan Government committed itself to a gradual freeing of the economy from the many state controls then in effect. A policy of industrialization through import substitution which had been carried beyond its efficient limits was considered responsible for many of the country's problems. The new official program is to discard this approach in favor of promoting export industries based on domestic raw materials. The large majority of these materials are agricultural, a sector in which Uruguay appears to have a comparative advantage.

Among the most important domestic reforms set in motion to date have been the abolishing of consumer subsidies and most price controls. An industrial promotion law has also become the basis for providing benefits to approved projects. A program of spinning off unprofitable government-owned enterprises has been initiated. At the same time there has been some trimming of staff and increased efficiency at the state-owned enterprises.

In an unconventional approach for a country with chronic balance of payments difficulties, the government has liberalized foreign trade hoping that the move will provide export industries with the means to develop. To date that liberalization has taken the form of more realistic foreign exchange rates, an attractive foreign investment law guaranteeing profit repatriation, reduction in tariff surcharges and the virtual abolishing of the requirement for consular invoices on imports. Of special significance was the ending in mid-1975 of the complicated import quota system which Uruguay had relied on to protect local industry. The old trade patterns, frozen by the quota system, are now breaking down, providing opportunities for new suppliers and goods to enter the market.

Continued reforms are expected

Basic reforms such as these are not implemented overnight and progress has been uneven. In spite of improvements, bureaucratic obstacles and requirements are still often difficult and time-consuming. The size of the government and its numerous regulatory functions complicate the decision-making process. Problems that remain to be resolved include further reduction of the continuing large government deficit and of excessive payrolls, reform of the country's social security system, and the return of many state-owned enterprises to private hands.

Nevertheless, there is a consensus among business representatives that more constructive economic reforms have been accomplished in the past two years than at any time during the previous decade. The program implemented to date by the recent Minister of Economy and Finance, A. Vegh Villegas, has won the support of the international financial community. The swearing in of a new President and a new Minister of Economy and Finance on Sept. 1 may cause a pause in the pace of reform, but is not expected to modify the gains that have already been made nor the basic thrust of economic policy. The new Minister, Valentin Arismendi, who moved up from the number two position in the Ministry, has reaffirmed the government's commitment to reform of the economy.

Overall performance is encouraging

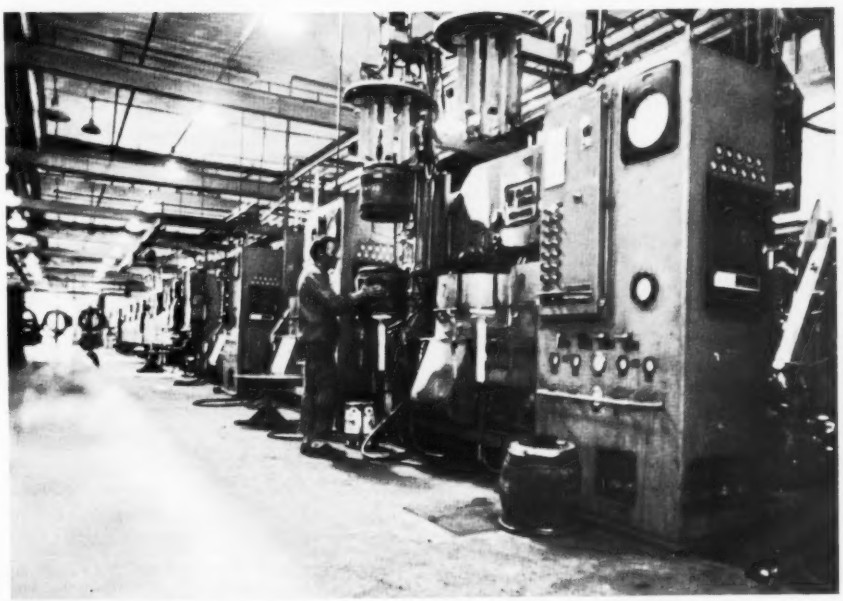
Economic performance during 1975 was relatively good considering that it had to be carried out under adverse world economic conditions. The domestic price index, which rose 107 percent in 1974, was held to an increase of 67 percent in 1975. The 11.2 percent rise reported by the Central Bank for the six months ending June 1976 was the smallest increase for any such period since 1971. Recent estimates are that the final 1976 inflation rate will be around 40 percent.

Central Bank figures indicate a probable GDP increase of nearly 4 percent for this year, similar to that achieved in 1975. While not spectacular, it is important when compared with the country's past record of low or even negative growth. It was also achieved at a time when growth rates around the world were at lower than recent historic levels.

The government has been slightly more successful this year in its attempts to reduce the budgetary deficit, which has declined from 27 to 18 percent. On the capital side, there has been an encouraging flow into the country, both from private and public sources, although some of the private flows may primarily reflect conditions in neighboring areas.

A number of major projects that will modernize the country's infrastructure are under way or planned for the near future. These include large hydroelectric dams, expansion of Montevideo's sewage system, modernization of microwave and telephone communications, port improvement, fisheries and waterworks. Two bridges spanning the river to Argentina have recently been opened. The U.S. Agency for International Development, the World Bank and the Inter-American Development Bank will be continuing or initiating programs fostering expanded agricultural and agro-industrial production.

Uruguay's near-term economic future will be strongly conditioned by movement in world markets for meat and wool, both of which are expected to improve. The European drought in particular is expected to lead to an increase in demand for beef beginning in mid-1977. Brazil should continue to be a large buyer of beef, providing an element of stability in



TIRE FACTORY IN URUGUAY—*This facility has expanded and improved its production with the help of credit provided by Inter-American Development Bank.*

the composition of Uruguayan exports.

Progress in 1976 is turning out to be notably improved over 1974 or 1975. Even though major problems remain, Uruguay seems to have weathered the crisis brought about by the petroleum price increase. As for prospects in this field, hopes that the country would discover oil have so far been disappointing. Chevron, which has a contract for offshore drilling of four exploratory wells, announced completion of a second dry hole and suspension of activity while test results are studied. Nevertheless, the government's policy of encouraging private investment and foreign trade, together with completion of the major infrastructure projects, bode well for reinvigorating the economy and promise increasingly bright prospects for Uruguay's future.

Trade with U.S. grows

Although small in real terms, Uruguay's trade with the United States is growing at a rapid rate. Between 1973 and 1975 imports from the United States doubled to over $50 million. The country is host to a modest amount of U.S. investment. If Uruguay continues to opt for reform, U.S. capital equipment, raw material and spare parts suppliers will have increased sales opportunities.

Uruguay's purchases for major infrastructure projects should also increase. As for openings for U.S. investment, the position of Uruguay between Argentina and Brazil adds opportunities under LAFTA complementation agreements and bilateral trade pacts with those countries. In the private sector, there will be a growing market for fishing trawlers and processing equipment, refrigeration, shoe manufacturing and other leather processing equipment, as well as for food processing and packaging equipment. Uruguayan meat packers, determined to diversify production, are actively investigating the purchase of U.S.-produced cooked and corned beef canning lines. Capital goods imports are up 70 percent over 1975.

Companies seeking to enter the Uruguayan market for the first time will, in the majority of cases, find appointing a local sales agent to be the most effective first step.

In the long run, U.S. manufacturers can expect to face increased competition from Argentina and Brazil. In addition to advantage of geographic proximity, lower import duties and close cultural ties, those countries are offering very favorable export financing for their products. U.S. firms with Brazilian or Argentine subsidiaries are benefiting accordingly. However, as import liberalization continues, opportunities for a wider range of U.S. exports will also be correspondingly enhanced.

Bermuda Market Is Small, But Broad, Affluent, Sophisticated

The Bermudian business community must wonder whether to mark the past year "bad" by comparison with other recent years or "good" by comparison with what other countries went through. In 1975, tourist spending, the mainstay of the local economy, increased although visitor totals declined. Retail sales and merchandise imports fell (cargo tonnage crossing local docks dropped 20 percent), while unemployment was recorded virtually for the first time since the 1930s, though still restricted to rates most other nations would envy.

There are now encouraging signs of a recovery in economic confidence, according to the American Consulate General in Hamilton. Preliminary customs statistics indicate that in 1976 imports are expanding in virtually every category except major capital items, providing solid evidence that local merchants are now rebuilding stocks.

Tourism accounts for 67 percent of the colony's GNP. Visitor totals fell slightly in 1975 from 1974's record pace, but revival of this key industry is now readily apparent. The government Department of Tourism called for an 11.4 percent increase in visitors this year, based not on the gain actually expected but rather on the increase needed to return Bermuda's tourist industry to its normal 6 percent annual growth plan. Even this ambitious target is now regarded as within reach; visitor totals through July were up 10.2 percent over 1975, while advance bookings indicate that the outlook for the balance of the year continues highly favorable.

Future of tourism

A well-placed local tourism official cautions that, in the future, yearly visitor gains will probably slow to 3 to 5 percent, due to saturation of available industry capacity. Similarly, it will be difficult to raise the average occupancy rates of Bermuda's hotels much above 75 percent. All hotels must be virtually fully booked during the March to October peak season to achieve such an average occupancy rate for the year. Looming difficulties in future tourism performance due to capacity shortages could well cause an early review of the present government moratorium on further hotel construction.

International business makes a contribution to Bermuda's economy second only to tourism. The number of "exempted" companies (incorporated in Bermuda but doing business elsewhere) continues to grow at a healthy pace; some 3,400 exempted companies, exempted partnerships and "non-resident corporate bodies" (firms incorporated elsewhere, usually in another tax haven, but operating in Bermuda similarly to local exempted companies) are currently active. A majority are U.S.-owned.

A 1975 U.S. tax law change relating to foreign subsidiaries of U.S. multinational companies has thus far had little measurable effect on Bermuda's international company "industry." However, as much of Bermuda's international business is attracted by the colony's tax-free status and relaxed regulatory climate, the future growth of this segment of the local economy is highly dependent upon the forbearance of home-country legislators.

Construction activity, once counted upon to take up a portion of the slack created by 1975's tourism downturn, has remained stagnant. A heavy schedule of major construction projects expected during 1975 and 1976 has largely failed to materialize, slashing building totals 5 percent below predicted levels in 1975 and 15 percent this year.

Prospects for revival of the long-depressed local building industry are improving, however. According to a key local planning official, building permit applications in 1976 are running at "normal" (pre-1975) levels and "several" major (by Bermuda standards) construction projects have recently received zoning permission.

The Government Housing Corporation plans to finance $10 million in residential construction over the remainder of this decade and a local mortgage banking firm recently announced plans to finance a further $5 million worth of new housing. The Bermuda Government plans to begin three major building projects, with a combined cost of some $20 million, in the foreseeable future. Commencement of these projects has been delayed thus far by environmental protests and by the necessity for obtaining appropriate financing, as their total cost equals nearly a third of the annual government budget.

Return to reasonable growth

These projects, together with a possible easing of the hotel construction moratorium toward the end of this decade, will probably insure that building activity will be restored to, and maintained at, a high level in coming years. However, a return to the boom conditions of the early 1970s is neither foreseen nor desired.

A particularly encouraging aspect of the local economic picture over the past year has been Bermuda's highly successful fight against inflation. The government Retail Price Index, heavily weighted (40 percent) by food items, increased by less than 1 percent between December 1974 and December 1975. This happy result was aided by fortunate timing:

prices of some food items fell during 1975, while devaluation of the currencies of important trading partners (sterling, the New Zealand dollar) eased the prices of many imported goods. The local inflation rate has continued its moderate climb in recent months, rising only 1.4 percent between December 1975 and June of this year. Government economists, who would once have gladly settled for a local inflation rate 150 percent of U.S. levels, now predict Bermuda's prices will rise about 3 percent during 1976.

In one reflection of the local recession, Bermuda's imports fell $8.3 million, or 5 percent in 1975. While U.S. exports to Bermuda also declined slightly (to $67.6 million), the American share of the Bermuda market rose to 47.8 percent, the highest level in years. Bermuda's other major trading partners, Britain and Canada, also boosted their market shares last year; the joint market share of the colony's three major suppliers climbed to 73 percent from 67.9 percent in 1974.

Wide range of demand

An outstanding characteristic of the Bermuda market is the breadth of local demand for American products. Bermuda offers full and complete facilities for the marketing of virtually every type of product and with adequate effort any firm with something new to offer can find a market there. Advertising and television campaigns appear to be the most useful means for expanding consumer product sales in Bermuda. Bermudians enjoy per capita incomes at American levels, while local merchants are among the most sophisticated in the hemisphere, with thorough knowledge of the business of international trade.

There exists in Bermuda a unique mixture of demand for best value for money together with a high degree of brand loyalty. Many commercial relationships, once established, will continue for generations. However, it should be kept in mind that foreigners must cultivate their Bermuda customers carefully to keep them.

In sum, Bermuda by virtue of its size can never be a volume export market but does offer American business a broad, affluent and sophisticated market forced by geography and lack of industrial resources to import virtually everything consumed.

There has been no attempt to measure total U.S. investment but it is unquestionably substantial. Bermuda's Companies Act of 1923 requires that Bermudians have an ownership share of at least 60 percent in any firm doing business in the islands. Exceptions to this requirement are occasionally granted for enterprises requiring substantial capital investment, such as major hotels. Restrictions on foreign investment in local businesses have channeled much of it into tourism infrastructure and residential property.

Americans own outright or have substantial participation in seven local hotels, including five of the largest in Bermuda. The Bermuda Monetary Authority estimates that 75 percent of the annual investment inflow (totaling $55.2 million since 1972) comes from the United States. Bermuda's business and political leaders continue to welcome foreign investment compatible with traditional local practice.

Bolivia Maintains Steady Pace, Places Focus On Development

Bolivia's economy grew by 6.8 percent in real terms in 1975, despite a downturn in world prices for the country's mineral exports. This level of activity has been maintained this year and prospects are excellent for continued expansion at about the same rate through 1977, as a result of improved world minerals prices and a high level of foreign financing for development projects, reports the U.S. Embassy in La Paz.

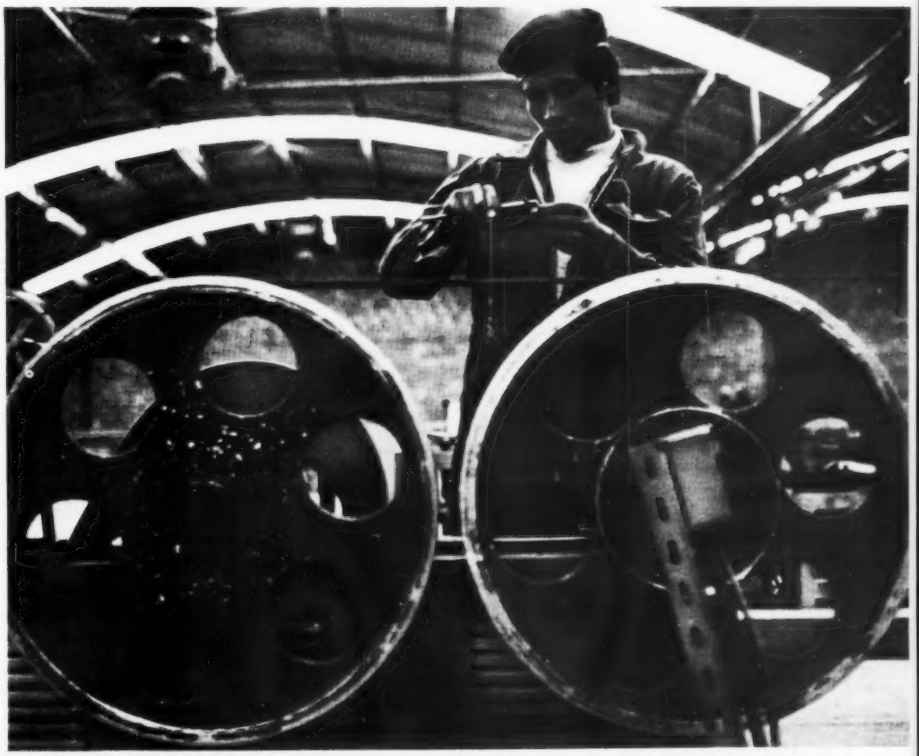
Over US$400 million in development loans to the public sector were signed in 1975 with international lending agencies, private foreign banks and third-country bilateral donors. An even higher level of external financing is occurring in 1976, with some $550 to $600 million in public sector loans expected to be signed.

Conservative monetary and fiscal policies brought inflation down to 10-12 percent in 1975, and to less than a 6 percent annual rate during the first six months of 1976. Due to the upturn in world minerals prices and strong capital inflows, the balance of payments is expected to be in surplus in 1976 and net foreign exchange reserves rose to $178 million in August, one of the highest levels in Bolivian history.

Climate of confidence

The strength of the peso, sound economic management, and prospects for continued political stability are fostering a climate of confidence, boosting domestic savings and private sector investment.

With the Bolivian Government's ambitious plans for large-scale industrial, infrastructural and social development projects under the new Five-Year Plan and Bolivia's increasing access to foreign financing, imports of capital goods and raw materials as well as foreign technical and managerial know-how should increase substantially during the 1976-1980 period. Important investment opportuni-



BOLIVIAN SERVICES MACHINERY—*Continued economic expansion is helping to generate a climate of confidence in Bolivia's business community. Factories such as this small facility which produces plastic tubes are expanding output to meet growing domestic and regional demand. (Inter-American Development Bank photo)*

ties will also exist, especially as joint ventures. Average growth during the Plan is projected at 7.7 percent annually, to raise GDP to $3 billion by 1980 (in 1975 dollars).

Bolivia should therefore continue to grow as a market for U.S. exporters and investors. U.S. exports to Bolivia increased by 144 percent in 1974, to $105 million; and by another 30 percent in 1975, reaching $138 mililion. For the first half of 1976, U.S. exports to Bolivia were down slightly to $59 million.

A summary of the Five-Year Plan has been published by the Bolivian Government and contains an excellent analysis of Bolivia's economy over the past five years, macro-economic projections for 1976-1980 and a sector-by-sector breakdown which lists over 300 major investment projects. Copies of the Plan summary can be obtained for $10 from Ministerio de Planeamiento y Coordinacion, Avenida Arce, No. 2147, La Paz.

During the Plan period, principal export opportunities will be in supporting equipment and supply needs in key sectors such as light and basic industry and manufacturing, mining and minerals processing, petroleum extraction and refining, petrochemicals, gas pipelines, road and airport construction and aircraft maintenance, railroad improvement and expansion of railway rolling stock, agricultural machinery and food processing equipment. In the social sector, investments are being made in hospital construction and medical equipment, housing, building construction, schools and educational materials.

Public sector entities purchase approximately 70 percent of all imported goods and services. While U.S. companies enjoy clear technological advantages for many products and services, public sector purchasing officials are very price conscious. In addition, by law all government entities normally must issue public tenders for purchasing only to firms domiciled in Bolivia or Bolivian representatives.

Spain Changes Duty Rates

Spain has recently increased import duty rates on a wide range of products by 6 or 12 percent, and made most duty-free items subject to a 1 percent rate. In the case of a few items, mainly clothing and furniture, duty rates were reduced by 6 percent. These duty changes are to be in effect until Feb. 28, 1977.

Information on specific products may be obtained from Regional Affairs for Developed Markets, Office of International Marketing, U.S. Department of Commerce, Washington, D.C. 20230; 202-377-2346. Inquiries should contain a complete product description, including BTN, SITC, or U.S. Schedule B Export Commodity numbers, if known.

Foreign Donors Help Zambia Confront Economic Problems

Zambia is confronted with an array of political and economic problems which are causing economic hardships and disrupting the nation's development efforts, reports the U.S. Embassy in Lusaka.

Severe deterioration of the balance of payments and budget have forced cutbacks in government programs and investment plans. Zambia's vulnerability as a land-locked country dependent on a single commodity, copper, for its foreign exchange earnings has been convincingly demonstrated since mid-1974 when copper prices began a prolonged and steep drop. This was accompanied by deterioration in the transport situation, which simultaneously forced a reduction in copper shipments and resulted in shortages of raw materials and machinery needed to sustain domestic output.

The assumption of the past that the copper industry would provide means to accumulate investment funds to develop other resources is no longer valid. While there is some optimism that copper prices will respond to improved economic activity in the industrialized countries, the economic measures that Zambia has been forced to adopt in response to the economic crisis will have a dampening effect on economic activity for some time to come. The 20 percent devaluation announced July 8 will improve the liquidity position of the mining companies but will add fuel to inflationary pressures.

There has been little new American private investment in Zambia, both because of the depressed economic conditions and investors' perception of long-term prospects for the private sector. Several American multinationals are negotiating with the government for industrial joint ventures.

Potential investors are also examining the implications of the requirement for greater worker participation under the program of Industrial Participatory Democracy announced by the President. An Act of Parliament provides that workers should be party to the decisions made on investment policy, job evaluation, appointment of senior management executives, financial control and distribution of profits.

Because most of Zambia's imports from the United States are essential capital goods for the mining industry and transport sector, these exports have been affected relatively less by import stringency. The U.S. share of the market rose from under 10 percent to about 13 percent in 1975.

According to Zambian statistics the f.o.b. value of imports from the United States reached $121 million in 1975. However, U.S. suppliers will continue to encounter delays of up to six months in receiving payments due to foreign exchange problems. Interest on the part of Zambian businesses in entering new agency/distributor agreements will be low until import restrictions are lifted and the future of the private sector is clarified.

Because of general agreement that most of Zambia's problems are due to factors outside its control, a number of international agencies and developed countries, including the United States, have agreed to provide substantial capital and development assistance.

The United States has agreed to assist with balance of payments support in the form of a commodity import loan in the range of $25 million. A U.S. AID Housing Investment Guarantee Program of $10 million is in the final stage of negotiation and Zambia may receive some food under PL-480. The World Bank during 1975 signed new loan commitments worth $95.1 million, bringing the cumulative commitment to $455 million. An additional loan from the Bank for commodity imports of about $25 million is under consideration. A loan agreement of $81 million was signed between Zambia and the EEC, and the IMF is expected to provide an additional $70 million through various financing facilities.

Trade Specialists Offering Counsel At NFTC Meeting

Department of Commerce trade specialists from New York, Washington and foreign posts will be available for individual counseling with business executives during the National Foreign Trade Council convention next week in New York.

The counselors will be in a special suite at the convention's Waldorf-Astoria headquarters over the Nov. 15-16 period. They are:

Edward C. Bittner, former Economic Commercial Attache, Venezuela; Roy O. Carlson, former Commercial Officer, Germany; Russell O. Prickett, former Economic/Commercial Officer, Japan; Ann Brosnan, Director, Regional Affairs, Latin American, African, Asian Markets; Sally Miller, Country Marketing Manager, Africa; Roger F. Stechschulte, Director, Trade Development Assistance Division, Bureau of East-West Trade; Peter Edmons, Country Specialist, Saudi Arabia, Commerce Action Group for the Near East, and Brant W. Free, Deputy Director, Office of International Finance and Investment.

Persons wishing to use this service are asked to contact the Commerce District Office, Suite 3718, 26 Federal Plaza, New York, N.Y. 10007, by calling Robert Hyams at 212-264-0624. They are asked to state their company affiliation and product interests.

Calendar For World Traders

Nov. 9—New York—Roundtable on scrap metal markets in Europe, World Trade Center. Contact: John R. McBride, Natl. Assn. of Recycling Industries, 330 Madison Ave., N.Y. 10017 (212-867-7330).

Nov. 10-16—Los Angeles—Four special World Trade Institute meetings at the World Trade Center: Financial and Tax Aspects of International Shipping; Introduction to International Taxation; Fundamentals of Foreign Exchange; Foreign Investment in U.S. Real Estate. For information: 212-466-7777.

Nov. 11—Peoria, Ill.—Export Awareness Forum. Sponsors: Peoria Area Chamber of Commerce, Illinois District Export Council, Commerce District Office. For information: 312-353-4450.

Nov. 15—Chicago—Seminar on Andean Pact and Transfer of Technology, Legal and Tax Problems. Sponsors: International Trade Club of Chicago, Council of the Americas.

Nov. 15-18—Washington, D.C.—International Symposium on Small Business, Hyatt Regency. Theme: Achieving World Economic Growth and Prosperity Through International Small Business Development. For information: 202-653-6742.

Nov. 17—Chicago—Seminar on Business Opportunities in Morocco, Palmer House. Sponsors: Mid America-Arab Chamber of Commerce, Chicago Assn. of Commerce & Industry, Commerce District Office. Arthur J. Laemmerzahl of the Commerce Action Group for the Near East will speak. For information: 312-782-4654.

Nov. 18—Chicago—International Trade Club luncheon meeting, Hyatt Regency. For information: Agnes Stenros, 312-341-9021.

Nov. 18—St. Louis — Conference on China's Agriculture and Prospects for U.S. Sales, Breckenridge Pavilion Hotel. Sponsor: National Council for U.S.-China Trade.

Nov. 18—Boston—International Business Center of New England's Trade Winds Roundtable and dinner meeting, Holiday Inn Newton. For information: 617-542-0426.

Nov. 18-19—Denver—Orientation seminars on Doing Business in Latin America (focus on Brazil and Colombia) and Middle East (focus on Iran and Egypt), Brown Palace Hotel. Sponsors: Center for the Orientation of Americans Going Abroad, and Colorado State Univ. College of Business. For information: 303-491-7571.

Nov. 19—Toledo — International Trade Assn. conference on international trade, Commodore Perry Motor Inn. For information: 419-243-8191.

Nov. 29-30—New York—Seminar on Doing Business with Kuwait, Bahrain, United Arab Emirates, Oman and Qatar, American Management Associations. Speakers include Peter B. Hale, Director, Commerce Action Group for the Near East.

Nov. 30—Boston—International Business Center of New England seminar on Foreign Exchange and International Money Management, Hyatt Regency Cambridge. For information: 617-542-0426.

Nov. 30-Dec. 1—Ann Arbor—Seminar on Your International Managers: Their Selection, Preparation and Compensation. For information: University of Michigan Graduate School of Business Administration, 313-763-1387.

Dec. 6—Cambridge, Mass.—Seminar on Energy and Petroleum in the Soviet Union, Harvard University. Sponsors: Department of Commerce's Bureau of East-West Trade, Russian Research Center at Harvard. Participants will discuss present and potential Soviet impact on world energy markets and trends in USSR domestic energy and supply. For information: Marshall Goldman, 617-495-4037.

INTERNATIONAL BUSINESS REPORTS

The Statesmen's Year-Book 1976-77. Edited by John Paxton. London. 1556pp. £7.95.

The 113th edition of this one-volume encyclopedia of the world's nations contains more than a million words and is a reference tool for everyone requiring up-to-date information and statistics. Several new features are included in this edition.

Write: MacMillan Press Ltd., Little Essex St., London WC2R 3LF.

Investment Financing Handbook. Overseas Private Investment Corporation. 16pp. Free.

The Overseas Private Investment Corporation is an agency of the United States Government which is intended to "mobilize and facilitate the participation of U.S. private capital and skills in the economic and social development of less developed friendly countries and areas, thereby complementing the development assistance objectives of the United States." This revised booklet briefly describes the services OPIC offers to American business in carrying out that charter.

Write: Overseas Private Investment Corporation, 1129 20th St., NW., Washington, D.C. 20527.

International Regulation of Multinational Corporations. By Don Wallace, Jr. 233pp. $17.50.

"This book is not concerned mainly with the rise or the phenomenon of the multinational corporation; nor is it, generally, concerned with what U.S. policies should be toward inward or outward foreign direct investment or multinational corporations, whether or not they are based in the United States. It is concerned with a specific set of proposals for dealing with multinational corporations; this set of proposals calls for the creation of an international organization that would regulate multinational corporations and foreign direct investment."

Write: Praeger Publishers, 111 Fourth Ave., New York, N.Y. 10003.

Exporters Get Metric Guide

A publication intended to provide basic information to American exporters on foreign laws and regulations pertaining to metric requirements for imported products has been issued by Commerce's Bureau of International Economic Policy and Research. American exporters are becoming increasingly aware of the growing practice of countries with which we have major trade relations to require imported products to be packaged, labeled and documented in metric units. In this country, the Metric Conversion Act of 1975 (Public Law 94-168) was signed on Dec. 23, 1975.

Metric Laws and Practices in International Trade: A Handbook for U.S. Exporters, includes statements on metric laws and regulations, as well as citations, for 36 countries which are major trading partners of the United States, as well as for the European Economic Community. The country reports also contain details on specific metric packaging and labeling requirements for imported products, and highlight points of particular pertinence to U.S. exporters.

This 74-page handbook is available for $1.45 from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Worldwide Business Opportunities

International trade specialists in the Department of Commerce and Foreign Service Officers in the U.S. Embassies and Consulates around the world are continually developing specific commercial opportunities through which American companies can find buyers, agents, partners or investors abroad. One of the major means for communicating these opportunities promptly and accurately to the U.S. business community is through the columns of this magazine.

The section that follows presents details about upcoming trade exhibits and trade missions, licensing and joint venture proposals, opportunities to sell to foreign enterprises and appoint agents, and details on major construction and expansion projects.

U.S. Promotions Abroad

For more facts on these and other U.S. exhibitions write: Director, Office of International Marketing, Rm. 4015, U.S. Department of Commerce, Washington, D.C. 20230. For trade missions: Rm. 6051, U.S. Department of Commerce, Washington, D.C. 20230.

Building Products and Construction Equipment Catalog Exhibit. Philippines, Thailand and Malaysia. January. All three countries are initiating aggressive building programs and expect to import most or all of the building products and construction equipment required. Pre-engineered and modular construction are either established techniques or are gaining wide acceptance in all three markets. Reinforced concrete, wood-frame, hollow building block, and structural steel are the common building techniques. Aluminum and wood are used for window and door frames. Call 202-377-3973.

Water Resources Specialized Trade Mission. Iraq, Saudi Arabia, United Arab Emirates. January. Iraq may be spending $5-$9 billion on water resource development, including six major dams and numerous municipal water system projects. In Saudi Arabia, a governmental review of six water resource surveys has generated new ideas to meet water requirements. According to the American Embassy in Jidda, the timing of this mission is ideal. Projects under consideration will run into the billions of dollars. Upcoming projects in the UAE include desalination stations, reservoirs, pumping stations, and new sewer plants. The U.S. Bureau of Reclamation soon will undertake a hydrological survey of the UAE, with future projects expected to result. Bob Vigneault, 202-377-4918.

Building and Construction Specialized Trade Mission. Iran and Israel. January. Growth in Iran's building and construction sector has averaged nearly 40 percent annually over the past three years. According to that country's current five-year-plan, some $6 billion is targeted to housing construction. Other major projects include port development, power plants, hospitals, refineries and factories. Major construction projects in Israel include entire new towns, an industrial complex, shipping and recreation centers, and various plants and factories. Call Bert Renborg, 202-377-3741.

Pet Products Exhibit (JEEP). Paris. Jan. 10-13. By 1985, France is expected to be the largest market in all of Europe for pet foods and accessories. Its 51 million residents currently care for some 7.5 million dogs, 7.5 million cats and the contents of 2 million bird cages and 1 million aquariums. One family in two has at least one pet. Because of the market's growth rate, good opportunities exist for American firms to introduce new products. Some 6-8 new-to-market firms will be eligible for this event. Ned Krause, 202-377-5381.

Data Communications Equipment Exhibition. U.S. Trade Center, London. Jan. 10-14. The U.K. data communications market, presently estimated at $150 million, is expected to reach $175 million by 1980. Imports account for over 90 percent of domestic consumption of this equipment, with the U.S. share above half. Items to be emphasized are computer peripheral controllers and interface devices, combination I/O devices and processors, input equipment, output devices, and parts and accessories of data communications systems. Anita F. Brownstein, 202-377-4443.

Electronics Production and Test Equipment and Electronic Components Catalog Exhibit. New Delhi and Bombay. Jan. 10-20. India is currently making a determined effort to accelerate the overall development of its electronics production capability. The U.S. currently holds 75-80 percent of the total Indian import market for production and test equipment, and in 1974 the U.S. accounted for 46.5 percent of Indian imports of electronic components. Both markets should be expanding greatly. Call 202-377-3973.

Timber Industries Equipment Catalog Exhibit. Madagascar, Zaire and Central African Republic. Jan. 13-25. These countries manufacture little of the equipment necessary for these industries. Although there is immediate sales potential only in the C.A.R., Madagascar has taken a World Bank loan for a major pulp mill project within the next five years, and Zaire is in need of retooling and expanding its timber industries in the near future. C.A.R. and Madagascar have eliminated tariffs against the U.S., and this, combined with devaluation of the U.S. dollar, has made U.S. timber industries equipment much more price competitive. Call 202-377-3973.

Port Development Technical Sales Seminar. Algeria, Tunisia, Qatar. Jan. 15-24. Oil and gas-rich Algeria is giving high priority to continued expansion of its ports to facilitate massive import needs and better control its export of hydrocarbon products. Extensive interest exists in containerization. Tunisia's main port of Tunis-La Goulette needs improved cargo handling and transportation facilities, and increased use of roll-on/roll-off vessels will necessitate changes in equipment and infrastructure at all of its ports. Prospects in Qatar are best for supplies of port and harbor equipment and port management services, as it considers recommendations for expansion of present ports and possible construction of a new port. Call E. Lee Carteron, 202-377-2973.

Microwave Technology and Test Instruments—Joint Export Establishment Promotion (JEEP). U.S. Trade Center, Paris. Jan. 19-21. With the French Government's recently announced plan to expend $30 billion during the next 5 years to modernize the national telephone system and with the recognized technical superiority of U.S.-made microwave products and test equipment, France promises to be a prime export market for U.S. manufacturers. Featured will be components, circuits, test and measurement instruments, equipment and systems, and antennae. Contact George Ruffner, 202-377-5381.

Motor Vehicle Maintenance Equipment, Replacement Parts and Supplies Exhibition. U.S. Trade Center, Mexico City. Jan. 25-28. The Mexican motor vehicle census has increased from 800,000 passenger cars, trucks and buses in 1960 to 3.2 million in 1974. Mexican purchase of motor vehicle replacement parts, service equipment and automotive chemicals was $194 million in 1974 and is expected to more than double by 1980. Mary R. Wiening, 202-377-4463.

Business Equipment and Systems Exhibition. U.S. Trade Centers, Paris, Jan. 31-Feb. 3; London, Feb. 8-11. These events will provide exceptional sales opportunities for American manufacturers. Past experience has shown that they attract executives influential in the purchase of equipment. The U.S. Trade Centers in Paris and London provide an effective and economical means of reaching buyers or setting up distribution. Exhibitor's contribution fee is $900 for companies new-to-market and $2,000 for those already established. Dwight L. Umstead, 202-377-4414 or 2177.

Avionics and Ground Support Equipment Technical Sales Seminar. Greece, Italy and Yugoslavia. Feb. 1-10. Seminar sessions will be conducted in Athens, Rome and Belgrade. "State of the art" presentations emphasizing the latest technological achievements in specific areas of avionics and ground support equipment will be given. Product categories to be included encompass communications such as traffic controls and flight instrumentation such as navigational aids commonly found in aircraft. Also, terminal support equipment and products used to test and service aircraft and aircraft engines as well as baggage and cargo handling systems. Airport and aircraft requirements are expanding rapidly as efforts are made

to modernize and improve air transportation systems in these countries. W. Bradley Tyrrell, 202-377-5285.

Medical Equipment Technical Sales Seminar. Czechoslovakia, Hungary, Poland. Feb. 1-15. Officials of these three countries have expressed deep interest in purchasing American medical equipment to improve their health care systems. This seminar will provide a proven, effective method to develop markets in Eastern Europe. Gary Roberson, 202-377-3376.

Hi-Fi Equipment Exhibition. U.S. Trade Center, Milan. Feb. 4-7. A special opportunity to show and sell the latest in hi-fi equipment is being offered to a limited number of American manufacturers. The U.S. Trade Center staff in Milan will launch an exceptional promotional campaign aimed at the widest possible trade and consumer audience exposure. AM-FM stereo equipment, amplifiers, speakers, synthesizers, electric guitars, tuners, microphones, headphones and complete amplifier systems are some of the items that will make up the exhibition. Call Mike Springmann, 202-377-2762.

Poultry Equipment Mini-Exhibit/Seminar. U.S. Commercial Office, Moscow. Feb. 7-10. The USSR's 1976-80 Five-Year Plan calls for a 100 percent increase in poultry production to be achieved by more mechanization and introduction of progressive techniques. New mechanized poultry farms and factories are planned and existing poultry farms are to be rebuilt using new machinery and technology that must be imported. Call Richard Bell, 202-377-5163.

Maritime USA '77—Port and Shipbuilding Exhibition. Kaohsiung. Feb. 7-11. The market for maritime, port and shipbuilding equipment in the Republic of China is growing at a rapid pace. Imports are estimated to reach $317 million by 1979. U.S. manufacturers are expected to supply one-third of this market, which consists of both government and private enterprises. Dave Horridge, 202-377-2798 or 5545.

Electric Energy Systems Exhibition and Seminar. U.S. Regional Trade Center, Singapore. Feb. 7-11. U.S. firms supplying this equipment have excellent markets in Singapore, Malaysia and Indonesia in both private and public sectors. Imports by Singapore alone totaled $172 million last year with strong growth expected. This exhibition, featuring generation, transmission and distribution, and instrumentation equipment, provides direct access to all three markets. Space is limited. Call Helen Burroughs, 202-377-2051.

International Houseware Fair. Cologne. Feb. 12-14. Products to be exhibited at the American Pavilion include: domestic machines and appliances, kitchen utensils, household and cleaning aids, incidental furniture and wicker articles, cutlery and flatware, fine metalwares and tableware articles, gift items, and arts and crafts. Germany's 62 million people live in 23.7 million households and spent $3.6 billion in 1975 on housewares. The market is expected to increase 3.5-5 percent annually during the next 3 years. Scheduled to coordinate with the International Hardware Fair, which in 1977 is expected to attract more than the 20,000 trade visitors from 64 countries recorded in 1976. Don Schmadel, 202-377-2177.

Electronic Data Processing Technical Sales Seminar. Bahrain, Iraq, Kuwait, Saudi Arabia. Feb. 13-28. Market information indicates an expanding market for American-made EDP products—particularly for firms whose products are compatible with IBM or NCR equipment. High interest in this event already has been expressed by government officials in the data processing field in these countries. Contact Brad Tyrrell, 202-377-4304.

Printing and Graphic Arts Exhibition, U.S. Trade Center, Tokyo. Feb. 14-18. Carefully researched projections of the Japanese market for printing and graphic arts equipment indicate a growth from $290 million to $335 million over the next three years. In 1979 total imports will approximate $83 million with the U.S. share exceeding $25 million. Imported equipment will include typemaking and typesetting machinery, presses, bookbinding machinery, and photographic equipment for the graphics industry. Purchasers will be interested in both new investment and replacement equipment. During the recession period of 1974-1975 imports of printing and graphic arts equipment registered a 20 percent decline; however U.S. exports in this product category for the same period increased nearly 20 percent, demonstrating growing demand. Cantwell Walsh, 202-377-4056.

Printing & Graphic Arts Equipment Product Literature Display. Johannesburg and Cape Town. Feb. 14-25. Trade sources indicate that for 1976-1980 a general growth rate of between 10 and 12 percent can be expected for printing and graphic arts equipment in South Africa. South Africa must import all of its printing and graphic arts equipment except for less sophisticated equipment such as sink units and washing equipment. Despite their appreciation for the quality and sophistication of American-made equipment in this field, a major share of the market goes to other suppliers. The primary reason is the lack of exposure of U.S. equipment in South Africa against the extensive promotion efforts conducted by U.S. competitors. This product literature display is important to offset these trends. Call 202-377-3973.

Agricultural Machinery & Equipment Exhibition. Guadalajara. Feb. 16-20. Mexican agricultural machinery and equipment imports are expected to exceed $110 million this year and are projected to increase by 25 percent annually for the next three to four years. Guadalajara is the second largest city in Mexico and one of its major agricultural centers. Call C. M. Cummings, 202-377-4463.

Agricultural Machinery Catalog Exhibit. Morocco, Tunisia, Libyan Arab Republic. Feb. 23-March 3. Agriculture is the main economic activity in Morocco and Tunisia, employing 70 and 60 percent of the population, respectively. Libya has placed highest priority on the reduction and eventual elimination of food imports, for which it is now almost totally dependent. The primary interest of all three countries is in irrigation and land reclamation. All three have earmarked large sections of their development budgets for agricultural development. None of these countries produces much agricultural machinery, and this, combined with their emphasis on agricultural development, should make them attractive markets for agricultural machinery. Call 202-377-3973.

Communications Equipment. U.S. Trade Center, Tehran. Feb. 27-March 3. The government is in the process of establishing a modern national communications system, and plans to expand communications facilities by 1000 percent during the next ten years. Iranian imports of communications equipment amounted to $185 million in 1972 and are projected to increase to $400 million by 1980. The majority of this equipment will be imported, since Iranian manufacturing capability in the field is limited. Karl Reiner, 202-377-2952.

Motor Vehicle Maintenance Equipment, Replacement Parts, and Supplies Catalog Exhibit. Nigeria, Zaire and Zambia. March 9-22. As a result of Nigeria's oil revenues the government has devised a five-year $50 billion development plan to cover all sectors of the economy and raise the national standard of living. A substantial part of the plan will be devoted to maintaining and expanding infrastructure ($7 billion for highway construction alone). Nigeria is still wholly dependent on imports to satisfy motor vehicle maintenance equipment needs. Couple the Nigerian demand for imports with the surge in motor vehicle assembly plants and there will be strong demand for maintenance equipment and parts for the foreseeable future. Zambia is a landlocked country and thus has to rely heavily on land transport systems to move copper to foreign ports. Zaire has been actively seeking direct foreign investment to enable it to grow. Foreign aid has been directed towards the agricultural and transportation sectors. 202-377-3973.

Industrial Instrumentation. Leipzig Spring Fair, German Democratic Republic. March 13-20. The second U.S.-sponsored exhibition at Leipzig will feature industrial instrumentation primarily applicable to the machine tool and processing machinery construction industry, the chemical industry, and the electrical engineering industry. Emphasis on these sectors is based on a realignment of economic policy goals calling for reinforcement of the raw materials base, an increase in and improvement of consumer goods to the public, and a production increase in the export sector. Buyers and trade officials from throughout Eastern Europe and the Soviet Union see this as their opportunity to inspect western goods and make purchasing decisions. Richard Bell, 202-377-5163.

"PRINTEMPS INFORMATIQUE" (Computers and related equipment) Joint Export Establishment Promotion (JEEP). U.S. Trade Center, Paris. March 14-17. Computer firms seeking to establish in the French market have an excellent opportunity to participate in this major annual computer exhibition, offered in conjunction with a "Computer-Aided Business" trade mission to the Benelux countries March 1-11. Peter B. Field, 202-377-4504.

Building Products and Systems, Construction Equipment and Architectural Hardware Exhibition. U.S. Trade Center, Tokyo. March 14-18. In 1974 the Japanese market for these products was $34 billion. The forecast for 1980 is $54 billion. New construction there is strongly influenced by western style and ideas. Private and public construction in 1974 was 2 million units valued at $67.9 billion. The 1980 projection calls for 3.1 million units at $110.1 billion. The Japanese seek advanced design interior and exterior building products of quality, and knowledge of building systems and methods that U.S. manufacturers can supply. Robert Levine, 202-377-4056.

Commercial and Industrial Security

Equipment Exhibition. London Trade Center, March 14-18, and Milan Trade Center, March 22-26. Strong and growing demand for this equipment has been identified by recent market research. The combined market for Italy and the United Kingdom amounts to about $350 million, of which about one third represents imported equipment. Products having high sales potential include intrusion alarm devices, security cameras, closed circuit television systems, access control equipment, fire detection alarms, automotive checking systems, anti-shop lifting devices, "bomb sniffers" and many others. Contact Sam Spaulding, 202-377-4508.

Tokyo Anti-Pollution Exhibition, TAPEX '77 Trade Fair, Harumi Pier, Tokyo. March 14-18. Japan's remarkable economic and industrial growth has spawned the worst aspects of high-paced industrial development with all forms of accompanying pollution: air, water, solid waste and noise. Demand for pollution control instrumentation alone will be $390 million by 1980 reflecting an annual growth rate of 15 percent. By the end of 1976, the Ministry of International Trade and Industry estimates, the market for all pollution corrective equipment will top $3.27 billion. Pollution technology offers opportunities for advanced U.S.-designed corrective equipment and instrumentation. Mara Yachnin, 202-377-5751.

Hotel and Restaurant Equipment/Franchising U.S.A. Stockholm. March 14-18. Promotion is aimed at Sweden, Norway, Denmark and Finland. In Sweden purchases of hotel/restaurant/institutional feeding equipment totaled $45 million in 1975—half by the public sector, 10 percent by employees' cafeterias and the remainder by hotels and restaurants in the private sector. These sales are expected to increase 9 percent annually over the next several years. The concept of franchising has been in the testing phase in Sweden but now appears to be entering the take-off stage. Jim Price, 202-377-2797.

Pumps, Valves and Compressors Catalog Exhibit. Bombay and New Delhi. March 14-24. India's five-year plan calls for an $18 billion industrial development program ($11.1 billion to public sector, $6.9 billion to private/cooperative sector) to maximize current output and create new capacity in certain target industries, including fertilizer/chemical, petroleum exploration and refining, petrochemicals, electric/nuclear power and industrial process equipment. India imported $35 million worth of PVCs during the fiscal year ending March 31. The U.S. share of this market has consistently run at about 33 percent. India's imports of PVCs are projected to total $143 million through March 31, 1979. 202-377-3973.

Computer Equipment Trade Mission to Belgium, Netherlands and Luxembourg. March 14-25. Will focus on computer applications for business efficiency and will promote such equipment as minicomputers, on-line point of sale systems, stock control and distribution systems, input devices for electronic computers such as optical character recognition (OCR), high speed printers, programmable terminals with local mass storage, and bank and financial terminals. Will also include computer programming and other software services. The U.S. share of computer imports into the Benelux countries is currently 84 percent for minicomputers, 23 percent for small, medium and large computers, and 23 percent for peripheral equipment. William Vitous, 202-377-3746.

Exhibit and Technical Seminar on U.S. Water Pollution Monitoring and Analysis Instrumentation and Systems. March 21-25. U.S. Commercial Office in Moscow. The purpose of this exhibit/seminar is to explore trade opportunities for U.S. water pollution equipment through discussion with a highly selected group of Soviet foreign trade officials, scientists, technicians and end-users. Each participating U.S. firm will be responsible for mounting a small exhibit and presenting a technical paper. Limited to seven companies. Judith Robinson, 202-377-3376.

Educational and Training Aids Exhibition. U.S. Trade Center, Sydney. March 28-April 1. Rating remarkably high as an education-conscious nation, Australia's utilization of multi-media learning materials instead of heavy reliance on printed materials has been one of the major developments in education over the past decade. Such educational reforms have produced an exceptionally good market for U.S. audio-visual equipment, technology, and related training aids. End-users include 4 major sectors, i.e., education, government, institutional, industrial and commercial. The total Australian market for audio-visual equipment is estimated at US$150 million annually, whereas the total market for books, periodicals, and other printed matter exceeds US$136 million annually. Recent trends indicating good sales opportunities for U.S. manufacturers in these product categories together with the success of an Audio-Visual Marketing and Training Aids Exhibition held at the Trade Center in 1972 underline the decision to sponsor the current exhibition. Ronald E. McCowen, 202-377-4957.

Agricultural and Food Processing Equipment. Budapest. April 15-20. Hungary relies on exports of agricultural products and processed foods to earn hard currency. AGROMAS EXPO is an opportunity to meet Hungarian buyers and end-users at a specialized commercial exhibition. Mike Frisby, 202-377-5186.

Electronics Industry Production and Test Equipment; Tandem Exhibitions at U.S. Trade Centers in Stockholm, April 18-21; and London, April 26-29. Market research recently conducted in Scandinavia and the United Kingdom has identified opportunities for the sale of U.S. EIPT equipment. The United States is a major supplier to these countries. Call William G. Stepp, 202-377-4602.

Hydraulic, Pneumatic and Advanced Fluid Power Systems, Equipment and Components Exhibition. U.S. Trade Center, Tokyo. April 18-22. A seminar will be included. The Japanese recognize superiority of U.S. production. In 1975 the market for both hydraulic and pneumatic power systems was $519.7 million. The market in Japan for hydraulic power systems will grow 10 percent annually for some time, while annual growth for pneumatic power systems will be somewhat less. Robert Levine, 202-377-4056.

Automotive Maintenance and Servicing Equipment Exhibition. U.S. Trade Center, Taipei. April 18-22. The market for this equipment in the Republic of China is expected to increase by 50 percent to about $12.7 million by the end of 1977, with the U.S. supplying approximately one-fourth. Rapid industrialization with concomitant expansion of the highway network have led the government and private sectors to a growing awareness of the need for greatly improved safety and maintenance techniques. Charles D. Jones, Jr., 202-377-5545.

Plastics Production Machinery and Equipment Exhibition. U.S. Trade Center, Mexico City. April 18-23. Mexico's plastics industry is expected to register especially rapid growth over the next few years. Consumption of plastics production machinery has been increasing at almost 15 percent annually, to $35.2 million in 1976. Some 85 percent must be supplied by imports, and the U.S. is the major supplier. In a February 1975 exhibition of this equipment, sales results were $1.5 million off-the-floor and almost $11 million projected. A technical seminar will be included. Mary R. Wiening, 202-377-4463.

Scientific and Industrial Laboratory Instruments Exhibition. U.S. Trade Center, Paris. April 19-22. In 1975, the French market for laboratory instruments amounted to $154 million. Most was supplied by imports, of which the United States accounted for 30 percent. Imports from the U.S. are expected to continue providing about one-third of total imports of a market which in 1980 should be about $240 million. Market research shows a good market for chromatographs, mass spectrometers, oscilloscopes, N.M.R. spectrometers and automatic analyzers. Ned Krause, 202-377-5381.

Business U.S.A.—A Business Equipment Exhibition. Hong Kong. April 25-29. Automation of office procedures and a large demand for modern business equipment in Hong Kong will result in yearly market growth of 32 percent between 1976 and 1979. Imports are projected to reach $54 million by 1979, double the level of 1974. A full range of electronic office machines, copying/duplicating equipment, microfilm equipment, electronic banking machines, letter handling/addressing/mailing machines, paper/check/coin-currency handling machines, and dictation equipment is required for all phases of the business community. Joseph Burke, 202-377-5285.

Printing & Graphic Arts Equipment Exhibition & Seminar. U.S. Regional Trade Center, Singapore, April 25-29. Market research indicates that an exhibition to capitalize on U.S. market share growth potential is warranted. The revaluation of German and Japanese currencies has made U.S. equipment even more attractive. U.S. suppliers now have an excellent opportunity to effectively compete with third country sources. J. Lee Barnes, 202-377-3893.

Industrial Process Controls and Instrumentation Exhibit. Caracas. April 25-30. Venezuela, buoyed by oil income, is attempting to establish a modern industrial economy in the shortest possible time. Industrial process controls will be playing a major part in this development. By 1978 at least 90 percent of process control requirements will still be filled by imports and U.S. manufacturers are expected to hold a 64 percent share of the $32 million market; this is equal to a 16 percent annual growth rate over the $15 million imported in 1975. Hans J. Amrhein, 202-377-2332.

Outdoor, Leisure and Recreation Equipment Exhibition and Seminar. U.S. Trade Center, Sydney. May 2-6. The combination of greater leisure time and new levels of affluence has created a surging interest in outdoor recreation in an already sports-minded continent. Dramatic increases in

consumption, up 60 percent in the past two years, have pushed annual retail sales of this equipment over the $146 million mark. U.S. suppliers will find a wide range of products with high sales potential. Lars Lofas, 202-377-3646.

Industrial Assembly Equipment Exhibition. U.S. Trade Center, Paris. May 9-12. French market for this equipment expected to grow to $925 million by 1978, with imports of $376 million. George Ruffner, 202-377-5381.

Food Processing & Packaging (FPP) and Agricultural Machinery & Equipment (AGME). Novi Sad, Yugoslavia. May 13-22. Yugoslav imports of AGME and FPP are forecast at $95 million and $55 million, respectively, for 1977. Government officials have recently designated self-sufficiency and increased export potential in these industries as a top national priority. A full range of processing, forming, filling, sealing, wrapping and packaging equipment is required in FPP; opportunities for sales of AGME include all varieties of planters, spreaders, dryers, loaders, and large combines, planters and harvesters. Contact Kenneth Nichols, 202-377-2762.

Hydraulic, Pneumatic and Advanced Fluid Power Systems Equipment and Components Exhibition. U.S. Trade Center, Tokyo. May 16-21. The Japanese market for this equipment is estimated to reach over $800 million by 1980. Over the past three years, in spite of a flagging Japanese economy, imports were increasing with U.S. supplying better than 75 percent. Specific end-user fields where U.S. products command a superior position are nuclear energy, ocean development, pollution control and aerospace development. Call 202-377-4056.

In-Store Promotion. Georges Australia Ltd. Melbourne. June. Will feature U.S. men's, women's and children's wear, accessories, housewares, household linens, cosmetics and stationery. Store contact: Alan M. Forbes, Mng. Dir., Georges Australia Ltd., 162 Collins St., Melbourne. U.S. buying office: Mutual Buying Syndicate, Attn. Camille Galbo, V.P., 11 W. 42 St., New York, N.Y. 10036. Mollie Cleveland, 202-377-4705.

U.S. Pavilion, 32nd Paris Air Show. June 2-12. Internationally long recognized as the key marketplace for the aerospace industry, the biennial Paris Air Show regularly attracts the largest international audience of industry, government and military aerospace buyers. With the total value of U.S. areospace exports for 1976 estimated to exceed $7.6 billion, the aerospace industry continues to be the largest exporter among U.S. manufacturers. In 1975, the 68 exhibitors in the U.S. Pavilion reported $2.84 million in off-the-floor sales and projected an additional $92.8 million in 12-month sales. Beryl D. Cohen, 202-377-4961.

Interhospital '77. Hanover, Germany. June 7-10. Commerce will have a U.S. pavilion in Europe's leading fair for hospital equipment. Nowhere else is such a concentrated opportunity offered to make direct contact with customers and potential purchasers. Interhospital will be divided into nine exhibit sectors: 1) medical techniques; 2) technical treatment equipment; 3) furnishing and equipment; 4) large-scale catering equipment; 5) laundry and chemical cleaning equipment; 6) catering supplies and materials; 7) food; 8) hospital textiles; and 9) services. Contact Robert Wallace, 202-377-3748.

Licensing, Investment Abroad

Licensing and investment proposals from foreign firms are listed in these columns. Specific product interests in each proposal are highlighted in bold type to facilitate identification and each proposal is preceded by the appropriate four-digit product number taken from the Standard Industrial Classification (SIC) Manual.

Background information on opportunities abroad and assistance on overseas investments are available from the Overseas Products and Investment Opportunities Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. "P" numbers should be used when responding to any of the specific proposals listed.

WTDR indicates that a World Traders Data Report containing financial and background information on the foreign firm is available for $15 from the Export Information Division, Room 1313, U.S. Department of Commerce, Washington, D.C. 20230, or from any Commerce District Office.

OPIC indicates that the country involved is eligible for investment insurance coverage and financing from the Overseas Private Investment Corporation. Information regarding applicable coverage may be obtained from OPIC, Washington, D.C. 20527.

FRANCE — A major company seeks to license patents or know-how on **gas-intensive techniques,** products or processes which require large consumption of gases. Products' or techniques' end application may be suited to variety of uses, or process may be result of increasingly sophisticated manufacturing techniques; but product or process must consume gases. Overseas Products & Investment Opportunities Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-76863.

0212—SAUDI ARABIA — Joint venture arrangement sought with experienced U.S. firm to establish ranch for raising **beef, cattle, sheep and camels for slaughter.** Ranch would comprise 2,000 sq. km. Overseas Products & Investment Opportunities Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-76857.

2020 — IRELAND — Manufacturer of dairy products seeks licenses to produce **food products,** including dairy products. P. F. O'Shea, Dir. of Technical Development, Avonmore Group of Companies, Kilkenny. P-76855.

2490—CHILE—Chilean Development Corporation seeks to sell to foreign investor 78.8 percent equity in local firm. Company, "Industria de la Madera, Impregna S.A." is engaged in **wood impregnation and related activities.** Specifications may be obtained at CORFO, Moneda 921, 8th Fl., Of. 822, Santiago; cost, $26.40. Offers must be sent in duplicate and in sealed envelope, to: Vice Presidente Ejecutivo De CORFO, Moneda 921, Of. 825, by 12 noon, Nov. 19. P-76864.

2492—SAUDI ARABIA — Trading company seeks joint venture to produce **particleboard** for wall panels using local timber sources. Estimated cost of project is $9 million, of which one-half is sought from U.S. participant. Abdullah M. Al-Matrodi, owner, Al-Enjaz Office for Trading & Contracting, P.O. Box 3568, First Nat. City Bank Bldg., Suite 406, Riyadh. Telephone: 20573. P-76858.

2851—KENYA — Seeks joint venture to produce **standard latex decorative wall paints, flat and enamel, interior and exterior; standard decorative paints for wood, interior and exterior; paint for asphalt and aluminum roofs;** and **paint for cement surfaces.** Firm is also especially interested in following types of paint: metal, epoxy based, marine, automobile and light aircraft. Company currently produces PVA adhesives, contact cements, and PVC coated fabrics. M. Yovel, Mng. Dir., Serafric Co. Ltd., Lusingeti Rd., P.O. Box 47679, Nairobi. P-76862. OPIC.

3010—AUSTRALIA—Company is seeking to extend its product range in rubber or plastic components by manufacturing under license, through contract, or by agency distribution with overseas companies. Summary of products sought includes: **inflatable products for milk industry; hardware and plumbing lines; automotive accessories (rubber and plastics);** and **rubber sheeting.** Peter G. Harding, Industrial Adviser, New South Wales Center, Suite 6259, Five World Trade Center, New York 10048. Reference D76/1059.

3079, 3564, 3589—SWEDEN—Seeks technologly through license or joint venture to manufacture following type of products: **plastic centrifugal fans in materials such as PVC, PP, FRP; plastic roof fans; scrubbers made of plastics; chemical containment air purifying equipment; and water treatment equipment specifically designed for galvanic industries.** Established in 1948, firm has 35 employees; annual sales, $1.2 million; is owned by AB Stobo. Company currently manufactures plastic fans, plastic dust systems, and small scrubber equipment. Rolf Arrman, Mng. Dir., AB Arex, Box 119, S-615 00 Valdemarsvik. Telephone, 0123/120 50; cable, AREXPLASTIC. P-76865.

3100—BANGLADESH — U.S. know-how sought for **leather finishing and/or production and manufacture of leather products.** Direct contact is sought only with companies in aforementioned operations. Send name, address, brochures for transmittal to project proposer to Overseas Products & Investment Opportunities Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-76856.

3312—INDIA—Bombay firm is interested in obtaining U.S. license to manufacture **composite steel** (mild steel with alloy steel insert) generally used as raw material for production of industrial knives. Partnership firm presently acts as importer and distributor of tool and alloy steel, composite steel and stainless steels, sales agent of manufacturer of circular saws. Its partner produces annually 400 M.T. of machine knives and 9,000 M.T. bright bars and shaftings. Proposed project envisages plant to manufacture 400 M.T. of composite steel annually. L. K.

Agerwal, Bashimal Vinod Kumar (VK), 132/134 Pradhan Bldg., Sardar Vallabhbhai Patel Road, Bombay 400 009. Cable, CHAFNIFE; telex, 011-3935. P-76873. OPIC.

3429, 3523—AUSTRALIA—Manufacturer wishes to diversify by increasing present range of products to include **agricultural equipment, builders hardware items, railway equipment and mechanical handling products.** Company is also willing to expand facilities to manufacture products considered marketable in Australia. Peter Harding, Industrial Adviser, New South Wales Centre, Suite 6259, Five World Trade Center, New York 10048. Reference D75/1527.

3443—ECUADOR—Medium-sized firm is interested in joint venture for manufacture of **boilers, sterilizers and kettles.** Interested party should be prepared to contribute patent name, machinery and equipment and equity (not to exceed 30 percent of total investment). Firm is experienced in installing, maintaining, and repairing aforementioned products. Ricardo Cassis, Gen. Mgr., IMA—Ingenieros Mecanicos Asociados Cia. Ltda., P.O. Box 3380, Guayaquil. WTDR. P-76854. OPIC.

3523—BELGIUM—Seeks license to **manufacture small machinery, particularly farm implements.** Presently manufactures portable milking machines; operates own sales force. Exports bulk of its production to Common Market, Ireland, Greece, South America and Africa. Is also interested in expanding outside farm machinery industry. Louis M. de Marcken, Mng. Dir., NATELCO s.a., Zoning Industriel de Bierges, Blvd. de l'Europe, B-1300 Wavre. Telephone, 010/41.34.35. P-76859.

3523 — UNITED KINGDOM — Seeks licensing agreement for manufacture of **bulk grain and feed storage bins.** Cooperative's 10.000 member farms (supporting about 280,000 cattle of beef and dairy types) presently receive their feed in bagged form. Coop management is expanding feed-mill capacity, and wishes to offer 6-, 8-, 12- and 20-ton bins to members when new plant is finished next summer. (Individual beef herd runs up to 300 head.) Poultry and pig feed conversion to on-farm bulk storage is also under consideration. Cooperative's present truck fleet can carry up to 12 tons per vehicle. North Eastern Farmers' membership presently look for metal structures, management favors fiberglass bins. Sales outside northeastern Scotland are not envisaged at this time. Edward Rainey Brown, Sales Development Mgr., North Eastern Farmers Ltd., Bannermill, Aberdeen AB9 2QT, Scotland. P-76866.

3523—UNITED KINGDOM — Manufacturer and exporter of agricultural axles, agricultural hydraulic rams, and suspensions, seeks to obtain licenses from U.S. firms to manufacture **new products.** Such products would be in **agricultural and industrial hydraulics, agricultural and industrial water metering devices and light components to be produced in general engineering machine shop.** Firm exports to all Europe, Australia, the Near and Far East and Africa. Established 1924, employs 550. James S. Lyon, M/D, Hunton Int'l Ltd., Int'l House, Drayton Road, Norwich, Norfolk NR3 2AH, England. P-76875.

3531—UNITED KINGDOM—Large firm, engaged in manufacture of hydraulic tipping gear and fabricated bodies for commercial vehicles, is interested in licensing agreements to manufacture products embracing hydraulics and metal fabrication preferably in sphere of **mechanical handling or earthmoving equipment.** Firm is part of large Wilmot Breeden Holdings Co. and employs 492. P. F. Mullholland, Mng. Dir., Telehoist Ltd., Manor Road, Cheltenham, Gloucestershire GL51 9SH, England. P-76867.

3535—AUSTRALIA—Company is seeking to expand its manufacturing base by obtaining licenses to manufacture **equipment for materials handling, storage and solid waste handling and disposal.** Company is prepared to enter joint venture association if so required. Peter Harding, Industrial Adviser, New South Wales Centre, Suite 6259, Five World Trade Center, New York 10048. Reference D76/1316.

3541, 3542—GERMANY — Manufacturer of **numerical controls for machine tools** seeks collaboration with company active in the same field. Firm envisages distribution of U.S.-made NCs with prior modification to German standards and market requirements, assembly of equipment with or without inclusion of German domestic components, license manufacturing or cross licensing, or any other cooperation agreement profitable to both partners. Maintenance and servicing of equipment in Germany and surrounding countries will be provided by foreign firm. Herr Ing. Grad. Dieter Laese, ELMETIC Steuerungstechnik GmbH, Weglache 5, 6200 Wiesbaden-Erbenheim. P76868.

3554—BELGIUM—Small manufacturer of **wide range of machinery** and **specifically equipment for paper, carton and paper board industries** seeks licensing arrangements to produce similar equipment. Firm has capability of manufacturing "medium-sized" machines. Its equipment can support items of about 5 to 8 tons. Company has its own engineering office and is particularly strong in paper mill equipment design. Employs 50. Edmond Chantreinne, Dir., Ets. Ed. Chantreinne s.p.r.l., 3, rue Delfosse, B-1400 Nivelles. Telephone: 067/22.21.91. P-76861.

3585—SAUDI ARABIA — Local trading firm is interested in importing and distributing equipment to produce energy from sun and wind, e.g., **solar cooling and heating equipment, wind energy systems, and photo voltaic electric power equipment.** Firm is also interested in possible joint venture arrangement to produce solar cooling equipment. Capital would come from Saudi firm; U.S. firm would provide technical know-how. Mahboob Ahmed, Al-Huseini Corp., P.O. Box 851, Jidda. P-76869. OPIC.

3589—UNITED KINGDOM—Seeks technology from U.S. firms in offshore oil exploration. Areas of interest include: **Degasification and/or de-aeration processes for water flooding of oil reservoirs; equipment packages for thermal recovery of oil from reservoirs;** and **electrochemical and other processes for breaking emulsions.** Company is well established as quality contractor to international petroleum industry, having completed multi-million dollar projects overseas and having been involved in design, supply and erection of five North Sea platforms. Is manufacturer and contractor for water treatment systems, heat exchangers, etc., and is subsidiary of a major U.K. engineering group which has annual sales exceeding £800 million. Interested firms should contact Douglas G. Hartley, Asst. Commercial Attache, U.S. Embassy, 24 Grosvenor Sq., London W1A 1AE, England, and refer to licensing opportunity No. 170. P-76860.

3621—AUSTRALIA—Company wishes to obtain technology or enter into licensing agreement to manufacture proven range of **solid state inverters** to complement range of equipment already designed and manufactured by company for sale in Australia and near countries. Peter G. Harding, Industrial Adviser, New South Wales Centre, Suite 6259, Five World Trade Center, New York 10048. Reference D76/1396.

3731—UNITED KINGDOM — Small shipyard, specializing in **building workboats** (about 30 ft. long), **small tugs** (about 50 ft. long), **fishing vessels, yachts, landing craft,** seeking licensing and/or joint venture arrangement to build vessels to its design and specification for marketing in U.K./Europe. Firm works in wood, steel, and glass reinforced plastic. Lt. Cdr. R. J. Bedford, Dir., Porthleven Shipyard (Cornwall) Ltd., Harbour Office, Porthleven, Cornwall TR13 9JC, England. P-76870.

3811—CHILE—Chilean Development Corporation offers for sale Empresa Nacional De Instrumentos De Precision Ltda. (ENAPRI). Plant, equipped to mount and manufacture dimensional metrology instruments, is located in industrial borough of Alto Penuelas, Coquimbo. Specifications may be obtained at CORFO,

Important Notice

Most member countries of the League of Arab States employ a secondary boycott against foreign firms which undertake certain specific types of business relationships with the State of Israel. The Commerce Department will not disseminate or make available for inspection any tenders or trade opportunity documents which contain conditions intended to support such boycotts, or which are based on documents known to contain such provisions. Trade or investment opportunities published herein are not presently known to be subject to such conditions. However, it is possible that U.S. firms responding to opportunities from Arab countries may be asked at some stage of a transaction to participate in an Arab boycott-related restrictive trade practice as defined in the Department's Export Administration Regulations (15 CFR, Part 369 et. seq.).

Firms are reminded that it is the policy of the United States (a) to oppose restrictive trade practices or boycotts fostered or imposed by foreign countries against other countries friendly to the United States, and (b) to encourage and request U.S. concerns engaged in the export of articles, materials, supplies, or information to refuse to take any action, including the furnishing of information or the signing of agreements, which has the effect of furthering or supporting such restrictive trade practices or boycotts. Accordingly, U.S. concerns receiving such requests to participate in a restrictive trade practice or boycott are encouraged and requested to refuse to comply with them.

Firms are further reminded that U.S. concerns receiving requests to participate in a restrictive trade practice or boycott must report such request to the Department of Commerce in accordance with Section 369.4 of the above-cited regulations.

Moneda 921, 8th Floor of 802 Santiago. Cost, $26.14. Offers must be sent in duplicate and in sealed envelope, to: Vice Presidente Ejecutivo De CORFO, address above, by 10 a.m., Nov. 30. P-76871.

3841, 3861—UNITED KINGDOM—Manufacturer, distributor, importer, exporter of **medical electronic equipment; high speed recorders, cardiac pacemakers and photo electric sorting machines,** seeks licensing agreements for products compatible with its present range. Annual sales volume, $8 million. A. J. Smale, Mng. Dir., Devices Ltd., 26-28 Hyde Way, Welwyn Garden City, Herts AL7 3AP, England. WTDR. P-76874.

4500—BOLIVIA—Government of Bolivia, Office of Civil Aviation is seeking joint venture to establish **aviation maintenance facility and/or radio repair service and overhaul facilities** in one or all of several air transport facilities. Bolivia has four major aviation centers with maintenance facilities as follows:

La Paz—Elevation, 13,400 ft.; commercial operations are mostly air carrier services; cargo is transported by B-17, B-25, C-46, DC-4, DC-7 type aircrafts; present maintenance facilities and R-2800 overhaul shop are below acceptable standards; private and corporation aircrafts such as Cessnas, Aero Commanders, Mu and Lear Jet operate from this airport.

Cochabamba—Elevation, 8,370 ft.; centrally located in Bolivia; is the executive, operational and maintenance base for Lloyd Aero Boliviano (LAB), the National Airlines; air taxi services and religious mission aircraft are flown with Cessnas, Beech, Bell, DC-3, etc.; C-46, DV-440, F-27 and C-82 aircraft are in cargo operation; two flight schools, one mechanic school, lab shops and training facilities are operated from this field.

Trinidad—Elevation, 765 ft.; is dependent on air taxi services; one flight school and two poorly equipped maintenance shops are located here.

Santa Cruz—Elevation, 1,1440 ft.; no maintenance shops exist; work is accomplished out of tool box and in shade-tree fashion; airport has many sales vendors representing Beech, Piper, Cessna, Aero Commander, etc.

Heavy air taxi services are necessary. Most air taxi operations are flown in comparatively late model general type aircraft. Bolivian Air Force operates from these fields. For additional information, contact Overseas Products & Investment Opportunities Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-76872.

Korean Firm Needs Materials

The Korean Tacoma Marine Industries (KTMI) has just negotiated a contract with the Government of Indonesia for the sale of four high-speed patrol boats.

KTMI has advised that all U.S. procurement of materials for the contract will be handled by its U.S.-based trading affiliate, Union Pacific Trading Co. (UPTC). UPTC is represented by Donald Vaughn, P.O. Box 629, Tacoma, Wa. 98401. Approximately $23 million worth of materials, including propulsion systems & aluminum sheet metal, will be procured offshore, and a majority of this business could go to U.S. suppliers already enjoying a commercial relationship with KTMI via UPTC. The Govt. of Indonesia is to purchase and furnish the weapons systems, which it is believed will be of Dutch/Italian origin.

The following trade opportunities are based on reports received from the U.S. Foreign Service—Department of State by the Trade Opportunities Division, Room 2323, U.S. Department of Commerce, Washington, D.C. 20230. The commodities in which foreign firms have interest are indicated by the five-digit numbers and commodity classifications which are from the Standard Industrial Classification (SIC) Manual and the Numerical List of Manufactured Products, 1972 Census of Manufactures.

U.S. firms should be aware that the listing in Commerce America *of opportunities to trade in specific commodities and technical data does not necessarily imply approval of their export by the Department of Commerce pursuant to the Department's Export Administration Regulations. Applicable export licensing regulations must be followed.*

Every effort is made to include only traders with good reputations. However, the Department cannot be responsible for any trade relations.

WTDR indicates that a World Traders Data Report on this specific firm is available at $15 from the Export Information Division, Room 1313, U.S. Department of Commerce, Washington, D.C. 20230. A WTDR is a trade profile which contains commercial information including financial references, on an individual foreign firm. Orders must include complete name and address of the subject firm and be accompanied by payment. Further information concerning WTDRs and request forms are available at each Commerce District Office.

The mark (●) indicates that this trade opportunity is a request for bids by a foreign government agency.

Direct Sales

Timber tracts

● **08110—CAMEROON** — Societe Becoroy (Paris) has issued invitation for tenders regarding Cameroon lumber project of affiliate Societe Forestiere et Industrielle de Belabo (Cameroon). Project includes: A) Forest industry likely to produce 158,000 cubic meters of logs per yr., to be processed in Cameroon or exported. Forest and civil engineering equipment, transport and commercial vehicles, radios & power chain saws are required. B) Sawmill, with production of about 16,000 cubic meters per yr. C) Plywood factory, with production of about 24,000 cubic meters per yr. D) Power station for steam and electric supply for the factories and auxiliary facilities. E) Tools and machines for building and maintenance. F) Prefabricated, metal buildings. Societe Becoroy can provide additional information upon request. Technical specifications available for 100 French Francs ($20) per spec. from Monsieur Le President Directeur Gen., Societe Becoroy, 38 Rue Brunel, 75017 Paris, Tel: 754-3316; Telex: 660-150 Becoboi, Paris. Bid deadline for A, E, F is Nov. 15; B, C, D is Dec. 15.

Building construction

● **15100, 16200 — AUSTRALIA** — Tender for design, manufacture, supply, delivery, erection, testing, commissioning, painting and maintenance of coal handling plant for Gladstone Power House, to be completed by September 1980. Major features include 2500 MT stacking out system, slot bunker to provide live storage in stockpile area, and 800 MT conveyor reclaim system with plow feeder. Financed by State and Federal Government budget. Tender aplication available for 20 Australian dollars (US$25) from V. Baker, State Electrical Commission, Warry St., Fortitude Valley, Queensland, 4006. Probable cost estimated between $5 and $6.25 million. First phase of planned $100 million expansion program. Bid deadline Dec. 8.

Women's, misses', children's, infants' undergarments

23400, 23600—FRANCE — French manufacturer of children's clothing wishes to import U.S. ready-to-wear denim clothing for sale and distribution in Europe. In return, French firm expects American supplier to distribute its products in U.S. market. For further information contact Peter B. Alois, U.S. Department of Commerce, Foreign Buyer Program, Washington, D.C. 20230, 202-377-3265.

Wood buildings

24520, 34480—IRAN—Firm of Gh. Mostaghim & Sons interested in representing U.S. housing manufacturer in Iran. Engaged in general commerce and market consulting. Interested U.S. firms contact Gh. Mostaghim at 210 Shah Ave., Tehran, telephone 662956-8, telex: 212529 HASO, cable: EKDAK.

Fabricated rubber products

3069711—GERMANY—Rubber druggist & medical sundries, including household gloves, water bottles, fountain syringes & combinations. W. Berlin importer & agent specializing in trade with GDR seeks import substantial quantities of all types of hospital & medical equip. for distr. to W. Berlin market & resale to end-users in GDR. Metric measurements only. Quote c.i.f. German port if possible. Reply to Erwin Kohlt, Erwin Kohlt Co., Anfred-Von-Richthofen-Strasse 75, D-1000 Berlin 42, Tel. (030) 786-50-31; telex 01-83-229.

Steel mill products

● **33100—PAKISTAN**—200,000 ft. 3″ diameter, 300,000 4″ diameter, 180,000 ft. 6″ diameter, 90,000 ft. 8″ diameter, 20,000 ft. 10″ diameter, 70,000 ft. 12″ diameter water distribution pipe. Also fittings for above pipes. Tender No. WASA/WS/003; bid deadline Dec. 14. Lahore Development Authority, 4A Gulberg V, Lahore. Tender documents

available from above address at $20 per set.

• **33100—ECUADOR**—14,600 pieces cast iron water pressure pipe to be used in residential water intakes. Tender No. 05-76; bid deadline Dec. 1. Empresa Municipal de Aqua Potable de Guayaquil, P.O. Box 5253, Guayaquil. Tender documents available from above address at $200 not later than 20 days before bid deadline. U.S. firms must have local representative.

• **33100—INDIA** — 800 kms galvanized iron wire with accessories. Tender No. IDA/604/GEB/5; bid deadline Dec. 20. Gujarat Electricity Board, Vidyut Bhavan, Race Course, Baroda 390 007, Gujarat. Tender documents available from above address at $13.33.

• **33100—GHANA**—10,500 meters of 90 mm diameter and 7,000 meters of 700 mm diameter pressure pipe with fittings for water mains. Tender No. MS/3; bid deadline Jan. 14. Associated Engineering Services Ltd., c/o Ghana Water and Sewerage Corp., P.O. Box 1840, Accra. Tender documents from above address or from Associated Engineering Services Ltd., 1661 West 8th Ave., Vancouver B.C. V6J, lVl, Canada at $30 per set.

Rolling, drawing, extruding of nonferrous metals

• **33500—MALAYSIA**—760,000 meters of HV and LV paper insulated power cables, various sizes. Tender No. 13883; bid deadline Dec. 21. National Electricity Board, P.O. Box 1003, 129 Jalan Bangsar, Kuala Lumpur 22-06. Tender documents available from above address at M $100 (M $2.50 equals US$1).

• **33500 — SINGAPORE** — Supply of shielded telephone cable for PCM transmission. Tender No. PT/127/76(x); bid deadline Dec. 10. Purchasing Telecommunication Authority of Singapore, Lines and Switching Department, 68 Orchard Rd., Singapore 9. Bidders who do not have an agent in Singapore may obtain tender documents from above address by paying a tender deposit of S $2,000 (about $819).

• **33500—SINGAPORE** — Supply of pulp insulated sheathed telephone cable. Tender No. PT/126/76; bid deadline Dec. 3. Telecommunication Authority of Singapore, Lines and Switching Department, 4th floor, 68 Orchard Road, Singapore 9. Cable: Telecom Singapore. Tender documents available from above address; deposit of S$2,000 (about US $819) required of bidders without agent in Singapore. If you do not have a rep., contact nearest Dept. of Commerce District Office.

• **33500—COLOMBIA**—Two high tension submarine cables of 66 KV, 1.3 kilometers in length. Project includes design, stringing, mounting and financing. Tender No. 014/76; bid deadline Dec. 14. Electrificadora de Bolivar, S.A., Cospique Mamonal, Cartagena. Specifications available from above address at 1,500 pesos ($43). Bids must be presented through local representative.

• **33500—THAILAND** — 10,000 meter 15 KV copper cable, single conductor, insulated with cross-linked polyethylene, No. 2 American wire gauge; 5,000 meter copper cable, No. 2/0 AWG; 12,000 meter copper cable, No. 500 million circular mil. Tender No. ADB-MEA-327; bid deadline Dec. 15. Metropolitan Electricity Authority, 121 Chakietch St., Bangkok 2. Tender documents available from above address at $5 per set.

Hand tools, metalworking mach., service industry machines, electrical industrial apparatus

34231XX, 3541529, 3589291, 3623XXX—ECUADOR — Mechanics' hand service tools; all types. Also, one meter mfg. & tool room lathes. Also, automatic & non-automatic car washing machinery; car undercoating machinery, utilizing silicone products or waxes instead of paint; "British armour glaze" type car body polishing machinery. Also, welding apparatus, electric; all types. 60 cycle 110/220 volt ac available. Send literature & quote c&f Guayaquil against l/c or s/d. Requestor reputable British organization operating chain of gas filling stations. Staff 104. WTDR in prep. Reply ASAP to Raul F. Alvarado, Mgr., Ecualube S.A., PO Box 7037, Guayaquil. Cable Ecualube; phone 3-00816.

Metal stampings

3466169—ISRAEL—Metal closures other than crowns—specifically aluminum tops. Size: 202 diameter; type: tear off tab; end use: canned frozen & fresh citrus juice; quantity required: 1 million drinking spout, 1 million full opening. Inquirer requests f.o.b. quotations & samples if possible ASAP as tops needed for current season by leading Israeli can mfr. Payment C.A.D. or L/C. Est. annual potential sale $100,000. Newly established; independent agent for steel & allied industries. 25 years experience in this field. Employs 3; expected sales for 1976 $250,000. Reply to—M. E. Weitzman, P.O.B. 146, 24 Jerusalem St., Kfar Sava. Telex 32470 (ATT 5027); tel. 052-20371.

Special industry machines

35521XX—TURKEY—One textile warping, sizing & finishing machine to incl. drying & thermosetting, thermofixing & heat setting compartments with oil circulation heating system, pin-clip combination chain. Speed: 50-60 meters/min. Width of tulle curtains to be processed: 3 meters. Weft straightener should be quoted separately. One doubling, measuring & packaging machine with capacity 30-35 meter/min. Width of machine at inlet 3 meters & at outlet 1 meter. Buyer textile mfr. since 1956. Produces 18 million meters tulle curtains & texturizes 4,000 tons yarn/yr. Employs 2,000. Interested U.S. suppliers communicate ASAP with firm directly, sending catalogs & prices f.o.b. & c.i.f. Istanbul. Reply to—A. Erdogan Aksu, Sancaktul Sanayii A. S., Halikali Youl 93, Safrakoy, Istanbul. Cable Sancaktul Sanayi-Istanbul; tel 737250.

Electric lighting, wiring equipment

36410XX—PORTUGAL—Lamps for aviation ground lighting equipment. Various types, quantities from 36 to 1,400 units. Buyer requests quotations ci.f. Lisbon; reportedly offers excellent representation for U.S. firm. Contact J. Montenegro, J. Montenegro, Lda., Rua Joao Pedro Ribeiro 725, Oporto; telex 25215 JML-P, telephone 495807. List of lamp types available from Consumer Goods and Services Division, U.S. Dept. of Commerce, Washington, D.C.; 202-377-2923.

Engineering, laboratory, scientific, research instruments

3811221—GERMANY—Vacuum or thermo-scales, test weight 50 grams, sensibility 1 microgram, compensated electric weight up to 15,000 milligrams, heat resistance up to 400 degrees c. Must order before Nov. 12, due to closing of business year. Quote f.o.b. U.S. harbor. One of best known German technical high schools. (Educational institution, non-profit organization). Reply ASAP to Herr Dipl.-Phys. Weiss, Technische Hochschule Aachen, Institut F. Eisen-und Huettenkunde, Intzenstrasse 1, 5100 Aachen. Tel 0241-425813.

Scrap materials

5093XXX—TURKEY—Steel scrap. Approx. 200,000 tons annually. Presently importing from Japanese sources. Interested suppliers should communicate with Eka giving prices f.o.b. East Coast c.i.f. Istanbul. Reply to—Eka Klima ve Tesisat A.S., Buyukdere Cad., Hukukcular Sitesi, Teras Kat, Mecidiyekoy, Istanbul. Cable Ekrem-Istanbul; tel 664924; telex 22885 Eka Tr.

Antique, secondhand stores

5931XXX—BOLIVIA—Automotive maintenance equipment, used. Reply to Reimex, Manuel Alarcon, Casilla 629, La Paz.
5931XXX—GUATEMALA—1 used 2000 KW AC steam turbine to operate at 200 PSI. 1 used hydraulic generator set to operate at very short drop (3 cubic meters/second). Turbine to run at 175 RPM; generator at 1250 RPM producing 500/600 KW AC. Firm is one of largest sugar mills in Guatemala, whose plant has cap. of 4000 tons/day. Wishes to set up small hydro power station to produce its own power as well as buy steam turbine. Reply to Friedrich Gernandt, MGN, El Salto, S.A., Finca El Salto, Escuintla, Guatemala.
5931XXX—TOGO—Used clothing. Firm located commercial area. Deals in gen. goods and sells mostly by wholesale. Employs 11 and makes approx. $80,000 yearly. Wish to import youth's wear, incl. trousers, shorts, shirts & polo shirts. Reply to: B.S. Olympio, Dir., ETS B.S. Olympio S.A., BP 1496, Lome.

Motion pictures

7813XXX—BOLIVIA—Films in Spanish, 8mm. Correspondence in Spanish. Direct sale & ag. Reply to Jorge Guitierrez, Casilla 1067, Santa Cruz.

Representations

Foreign private firms are interested in agency agreements and/or distributorships for these products.

Ferroalloy ores

1061XXX, 1099XXX—INDIA—Two M/T/yr. molybdenum ore; platinum. Wishes represent U.S. firms which supply above. Quantities mentioned against products are only estimates. Firm claims to represent Titan Industrial Corp., New York, & Indian mfgs. of a wide range of products, such as chemicals, communications equipment, machine tools, rubber, minerals, & textiles. Reply to—A. G. Amin, Commercial Mng., Kalyan Asso., 4-3-632 Tilak Road, Ramkote, Hyderabad 500001. Cable Aminfile; tel 53066.

Sawmills, planing mills

2421811—AUSTRALIA — Softwood flooring. Medium size mfr. distr./importer & exporter of home insulation; spiral staircases. Imports from New Zealand. Employs 120. Annual sales volume $2.6 million. Interested in agency, distr., & mfr. under license. Reply to E. H. Nieman, Mng. Dir., Weathermaster Pty. Ltd., 2 Attenborough St., Dandenong, Vic 3175. Cable Weathermaster Melbourne; tel 03-7929364.

Wood products

2499598, 3999998—UNITED KINGDOM—Wood bee-keeping products; bee-keeping products other than wood. Estab. 1957, employing 45. Mfrs. automobile test equip. Launching new program & seeks supplies of bee-keeping equip. for sale to hobbyist trade. Reply to—P. B. Ingle, Speedograph Ltd., Darlton Drive, Arnold, Nottingham. Tel 0602-264235; telex 377-136; cable Tachograph Nottingham.

2499583 — NETHERLANDS — Woodenware. Excl. agency. Estab. 1947. Staff 23, auth. capital fls. 100,000; paid in 40,000, annual sales fls. 30,000,000. Bankers—Amro-Bank NV, Overtoom 89, Amsterdam. Representations incl. — Kraemer Mercantile Corp., 500 Fifth Ave., N.Y.; Sportsotron Intl., Inc., 85 Engineers Rd., Smithtown, N.Y.; Pragoexport & Merkuria, both in Prague, Czechoslovakia. Recommend transactions on secured basis. Reply to—J. Simons, Mgr., Harry Simons Agencies BV, Tijnmuiden 20/22, PO Box 8258, Amsterdam-Sloterkijk 3. Cable Simag; twx 14251; tel 020/115151.

Special industrial machinery

3559589—SPAIN—Machine for winding rubber thread used in mfg. golf balls. Requests information on machine, its operation & price. Medium-size business engaged in mfg. golf balls. Would like to receive information on machinery & equip. used in U.S. for mfg. golf balls. Correspondence in Spanish. Call or cable Cesar Seville Enciso, owner, Avda. D. Eliseo, 21, Arnedo, Logrono. Tel.: 941 380 031.

General industrial machinery

35699XX—34994XX — SWEDEN — Hydraulic jacks, especially low-fitting operating in any position. Hydraulic pumps, valves & cylinders for heavy workshop & industry. Permanent magnets for lifting metal sheets & other metal wares. Vacuum pumps & complete vacuum lifters for lifting metal sheets, board, particle boards, glass & stone. Agent, distr. & importer of iron & steel products, construction equip., metalworking machinery & materials handling equip. Has share capital of skr 1 million & annual turnover skr 12.3 million. Recommended trade contact. Reply to—Hakan Schmidt, Henry Wallenberg & Co., AB, Box 7026, S-103 81 Stockholm. Cable Going; telex 19116; tel 08/23 86 80.

Office, computing, accounting machines; electronic components; optical instruments

3573XXX, 3674XXX, 3679091, 38321XX—SWEDEN—Special purpose terminals; digital communications line interface equip., such as modems, etc; micro-computers, digital, gen. & special purpose; card key entry devices; graphic displays; printers; industrial control input-output equip.; input-output devices incl. plotters; paper tape readers, paper tape, punches, etc.; alphanomeric display terminals based on CRT displays. Also, diodes & rectifiers; light sensitive semiconductors, zener diodes & other semiconductor devices; filters (except microwave), infrared, ultraviolet, etc. Also, PH electrodes & meters; electro-optical test equip.; electro-optical components, except opthalmic & photographic. Large, finan. sound co. has share capital of SKR 21 million. Annual turnover approx. SKR 160 million. 1,800 employees. Affiliated with intl. well known Telefon AB L.M. Ericsson. Highly recommended trade contact. Reply to Hans Edlund, Svenska Radio AB, Fack, S-163 00, Spanga. Telex 10094; tel. 08/752 10 00.

Electrical machinery, equipment, supplies

3699251—BOLIVIA—Musical door bells, different types. Quotations c.i.f. Santos, Brazil or Buenos Aires, Argentina. Correspondence in Spanish. Reply to—Granado Ltda., Carlos del Granado, Ave. Monsenor Rivero 768, Santa Cruz.

Future Construction Abroad

MALAYSIA—Government has announced opening of **port project** located at Pasir Gudang, near Johore Bahru. Includes two dry docks capable of handling ships of up to 400,000 tons and 140,000 tons, respectively. Total project expected to cost M$190 million (US$76 million) when all phases completed. Project is joint venture between government (51 percent), Sumito Shipbuilding and Machinery Co. of Japan, International Maritime Carriers of Liberia and a Malaysian firm, Kouk Brothers Sendirian Behad. OPIC.

SINGAPORE — Telecommunication Authority of Singapore (TAS), Plaza Singapura, 4th Fl., 68 Orchard Rd., Singapore 9, is in second year of **Five-Year Development Program** which involves capital investments of U.S. $400 million for 1975-1980. Following are some of the major purchase areas and projected time frame during which tenders can be expected: Underground cable—tender will be in Nov. 1976 for D-shield cable (truck line), and other tenders for standard cable will be issued throughout 1977. TAS interested in optic fiber technology and may consider buying cables using optic fibers in 1978-79. Pulse code modulation equipment — two tenders have already been won, but there will be additional tenders toward end of 1977. International switching center (gateway telephone/telex exchange)—will be installed in TAS's new headquarters building scheduled to open in 1979; tender in Nov. 1976. Submarine cable projects—ASEAN countries are finalizing plans for number of new underwater cables to connect countries of Southeast Asia. First ASEAN project will be 14 mega Hz cable link from Luzon in Philippines to Singapore to be completed by 1979; tenders for this project and a Hong Kong-Kuantan (Malaysia)-Singapore cable project could be as early as first half of 1977; other projects under consideration are Singapore-Jakarta cable and Singapore-Penang-Indian Ocean cable. Electronic data processing equipment — TAS currently operates two large UNIVAC computers and has plans for a third main frame unit within a couple of years. TAS's new data processing service with telephone hookups should be operational this month; TAS has continuing interest in multiprocessors, teleprints, and other types of peripheral equipment. OPIC.

BURMA—Planning Department of government's Ministry of Finance and Planning has released short description of proposed **agribusiness opportunities** for a five-year investment program running from Burmese FY 1977-78 to 1981-82. List is available from U.S. Dept. of Commerce, TOP, Rm 2321, Washington, D.C. 20230; 202-377-2251. Many of these projects seem to offer substantial opportunities in the agribusiness sector for a wide variety of U.S. firms ranging from consultants and engineering/construction contracts to direct sales of equipment, machinery, spare parts and livestock.

THAILAND—Construction of government-owned Women's Hospital Expansion Project will be completed by late 1977. Separate tenders will be issued in 1977 for supply of **assorted medical equipment.** Interested U.S. suppliers may write to: Dr. Kamol Sinthavanich, Dir. Gen., Department of Medical Services, Ministry of Public Health, Samsen Rd., Theves, Bangkok. OPIC.

ROMANIA—Bidders are sought to supply **materials and equipment for the Riul Mare—Retezat hydropower project** being financed by IBRD. Revised dates of tender opening and costs of bidding documents follow: A. steel for tunnel lining, Dec. 15, $50; B. mechanical equipment for dams and secondary intakes, Jan. 12, $100; C. turbines and generators, Jan. 19, $150; D. dam monitoring instruments, Jan. 26, $150; E. power transformers, January (exact date not yet fixed), $100; F. electrical equipment for primary and secondary commutation, Feb. 4, $100; G. automation and remote control equipment, Feb. 9, $100. Bidding documents will be issued two months before date of tender opening. Documents can be obtained from Mrs. Mariana Giosanu, Romenergo, Bulevardul Lacul Tei 1, Bucharest, Telephone 12-13-26, Telex 017-25. Payment for documents should be made to Romenergo's account #4011041-1 opened with Romanian Bank of Foreign Trade.

EGYPT—General Organization for Sewerage and Sanitary Drainage is seeking qualified firms for supply and installation of 10 **diesel generators** to be used in sew-

The Overseas Private Investment Corp. (OPIC) offers political risk insurance to U.S. construction firms planning to submit bids on projects in certain developing countries, identified by the "OPIC" notation at the end of some items. For further information on OPIC's construction insurance program, write Information Officer, Overseas Private Investment Corp., Washington, D.C. 20527. Tel: 202-632-1854.

age pumping stations. Bidder selected will be expected to supervise erection of generator plants. Tender documents available for LE 50 pounds (approximately $125) from General Organization for Sewerage and Sanitary Drainage, Foreign Purchase Committee, Sixth Floor, Tahriir Bldg., Tahriir Square, Cairo. Tenders will be accepted only from public sector companies or registered trading representatives. Closing date for submittal of proposals Dec. 15. For additional information contact: Pete Zantal, CAGNE/BIC, U.S. Dept. of Commerce, Washington, D.C. 20230; Phone: 202-377-4441.

Visiting Buyers & Officials

AUSTRALIA—Karl Brunner will be in the United States for about 10 days starting Nov. 25. He wishes to purchase snow-making machinery for a ski resort now under development. For additional information, contact Peter B. Alois of the Foreign Buyer Program, Room 2322; 202-377-3265.

FRANCE—Jean Claude Malouvier and Pierre Liberge of Paris are interested in hearing from U.S. firms supplying the glass industry with **chemical specialties, molding compounds, and small equipment.** For further information contact Theresa E. Rettig, Foreign Buyer Program, Room 2322, U.S. Department of Commerce, Washington, D.C. 20230; 202-377-3265.

SWEDEN—Officials of the Swedish Marketing Federation wil visit the United States to meet U.S. **marketing consultants and marketing offices** of U.S. firms with a view to applying U.S. techniques to the marketing of U.S. products in Sweden. The Federation promotes modern marketing techniques and supports market research. Ms. Lamm, Ms. Orner, and Mr. Rietz will visit New York Nov. 26—Dec. 1; Chicago, Dec. 6-8; and San Francisco, Dec. 14-17. American firms interested in meeting this group should contact Bill Corfitzen, Room 2322, U.S. Department of Commerce, Washington, D.C. 20230; 202-377-2068.

EGYPT—Fouad A. K. Hamza is visiting the United States to seek American supplier for 15 refrigerated **railroad cars** (bogie vans). Hamza has tender documents and specifications issued by the Egyptian Railways Electrical Engineering Department. Tenderers are invited to submit bids for supply of the 30-ton refrigerator bogie vans, 80-cubic meter capacity, equipped with two independent, identical, self-contained refrigeration units complete with diesel-generator sets. Vans are to be built in accordance to specifications and drawings available from Hamza. Hamza is also seeking agency distribution arrangements to represent American products and firms in Egypt. Although Hamza is willing to consider representing American firms bidding on any of Egypt's economic development projects, he is particularly interested in representing U.S. firms which can provide: 1) **water and sewage systems and equipment;** 2) **accelerated tile drainage systems and equipment,** 3) **grain and vegetable oil storage systems and distribution equipment.** Interested American firms may contact Hamza directly at Riverside Tower Apartment Hotel, 2201 Virginia Ave., NW., Suite 401, Washington, D.C. 20037, phone 202-452-4600, or through John Hardisty, U.S. Department of Commerce, Washington, D.C. 20230; 202-377-4523.

SWEDEN—Eric Edborg is in the United States and wishes to meet manufacturers of **leisure clothing for extra large and tall men** for direct import. His firm specializes in clothing for big men, and although small, has a sound credit reputation. For additional information, contact Peter B. Alois, Foreign Buyer Program, U.S. Department of Commerce, Washington, D.C. 20230, 202-377-3265.

AUSTRALIA—Gregory J. Morris wishes to meet manufacturers of expanded PVC and polyurethane foam. Morris is Managing Director of a firm that manufactures **gaskets, seals and filters,** and will be in the United States for two weeks starting Nov. 22. Contact Peter Alois, 202-377-3265.

AUSTRALIA—David Wikstrom of Sydney, is planning a visit to the U.S. in February or March 1977. He is interested in **emergency services equipment for ambulance, police and fire department rescue squads** and may be contacted through Theresa E. Rettig, Foreign Buyer Program, Room 2322, U.S. Department of Commerce, Washington, D.C. 20230; 202-377-3265.

ISRAEL—Rafael Sirkis will be in the United States for one month starting Nov. 15, and wishes to meet manufacturers in the following fields for possible representation: **radio and TV communication equipment, electronic research and detection apparatus, and scientific optical instrumentation and lenses.** Sirkis will be on both the east and west coasts during his visit. For further information, contact Peter B. Alois, U.S. Department of Commerce, Foreign Buyer Program, Washington, D.C. 20230; 202-377-3265.

AUSTRALIA—Simon Green wishes to contact manufacturers of **pinsonic quilting machines.** He hopes to produce quilting which is 116 inches or wider in one operation without sewing. Although he has not yet established his itinerary for the U.S., he will send a representative to the manufacturer within 6 weeks of making contact. For further information, contact Peter Alois, 202-377-3265.

JAPAN—Akiro Saito of Tokyo wishes to import and distribute **dyestuffs** used in textiles and industrial chemicals. His firm was formed in 1937, and has annual sales of approximately $1,000,000 per year. Contact Peter B. Alois, 202-377-3265.

ECUADOR—Ms. Joyce Ginatta, General Manager of an importer/dealer, wishes to contact American firms for **general builders' supplies.** The firm has a good reputation, and wishes to expand its product lines. Peter Alois, 202-377-3265.

INDIA—N. Krishnan, Chairman and Managing Director of the Cochin Shipyard, will be in New York Nov. 7-12 and is interested in hearing from U.S. suppliers of **shipyard equipment.** For further information and his New York address, call Theresa E. Rettig, 202-377-3265.

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